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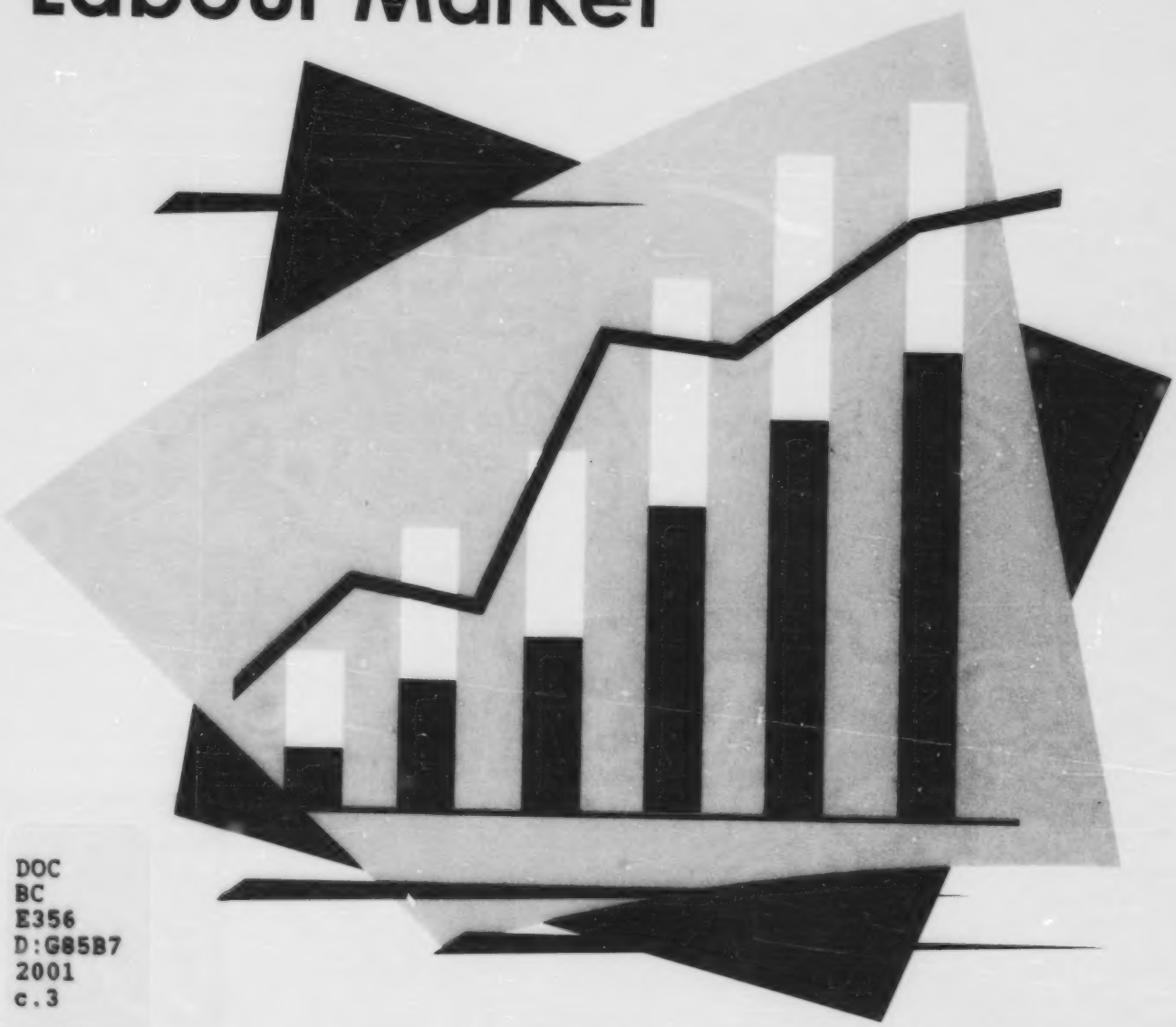
A Guide to the BC Economy and Labour Market



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Lillian Hallin
BC Stats

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Lillian Hallin
BC STATS
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Foreword

Every day we hear about the economy from television, radio or newspaper reports. Stories about record corporate profits, an established business having to close, unemployment, or the high technology industry's concerns about a shortage of skilled workers are commonplace in today's media. Given this backdrop, it may seem that there is already enough information available on our economic affairs.

So why do we need a book specifically on the British Columbia economy? The objective in producing *A Guide to the BC Economy and Labour Market* was to provide an engaging and understandable overview of the provincial economy for non-economists. With all of the changes that are occurring in the economy and the workplace, many career counselors, teachers and other career practitioners recognize that they need to know more about the economy in order to address the career development needs of their clients and students.

This book provides basic information on the industrial building blocks of BC's economy as it exists today and what it may look like in the future. It focuses on provincial industries with an emphasis on their human resource side. Economic terms are explained and examples provided, so that a background in economics is not needed to understand the material. The book also provides an historical perspective on how the provincial economy has evolved, which helps to better understand where we may be going as we begin the twenty-first century.

A Guide to the BC Economy and Labour Market will be of interest to students, job seekers and others who may be exploring the world of work, planning their educational path, or contemplating a career change. Because it provides a unique compilation of information and statistics not available elsewhere, this publication will also be a useful resource for students in academic courses, and a helpful starting point for professional analysts and planners.

A Guide to the BC Economy and Labour Market has been produced to complement *Work Futures: British Columbia Occupational Outlooks 2000*. Work Futures provides another important perspective on provincial labour market information by detailing BC occupations, including their current situation and their future prospects.

A Guide to the BC Economy and Labour Market is a tribute to the thorough knowledge of the BC economy and the exceptional writing skills of the author, Lillian Hallin. Lillian, who is the Chief of Economic Accounts and Analysis at BC STATS, has authored a number of publications and papers on the provincial economy.

A Guide to the BC Economy and Labour Market is the result of a partnership between BC STATS, the Ministry of Advanced Education, Training and Technology (MAETT), Human Resources Development Canada (HRDC) and the Centre for Curriculum Transfer and Technology. It is part of the New Directions in Labour Market Information initiative. One objective of this initiative is to develop new labour market information products and services that support effective labour market planning and decision making on the part of British Columbians.

To all readers, we welcome your comments on this publication. To career practitioners and teachers, we particularly welcome stories and examples about your experiences in making use of this publication with your clients and students.

Don McRae
Director, BC STATS
Ministry of Finance and Corporate Relations

Jim Howie
Manager, Labour Market Services
Ministry of Advanced Education, Training and Technology

1. Why should you read this guide?

BC's economy and labour market is changing

Personal computers. The Internet. Cyber-cafes. Nintendo® games. VCRs and DVDs. Roller blades. Compact discs. CD ROMs. What's special about them?

Twenty years ago, hardly anyone used a personal computer or VCR, and most of the other products were unknown. Today, many of them are household items that may be used on a daily basis.

When new products are introduced, they often create a demand for related goods and services. They also displace other products. Do you remember the last time you saw a record in a music store? In the early 1980s, sales of cassette tapes were just beginning to exceed record sales, and compact disc recordings weren't even available. They don't make records any more, and even tapes are getting harder to find as more and more people prefer to use CDs. It's likely we'll see the same thing happen to VCRs and video tapes now that DVDs are on the market.

The world is changing around us, and it's not just because new products and technologies are being developed. People's tastes, ideas and expectations are evolving. So is the way that goods and services are being marketed.

Cappuccino bars and coffee shops are a good example of this. They were relatively rare until just a few years ago. Now there's one on almost every street corner—and they're in a lot of big bookstores. Ten years ago, you'd never go to the neighbourhood bookstore to buy a cup of coffee (and you probably wouldn't have known what cappuccino was). You certainly wouldn't have been allowed to browse through the latest bestsellers while sipping a latte.

There are many more examples of how much, and how quickly, things change in the economy. Big-box retailing, no-name products, and retail outlets that sell a certain image or product label that's prominently displayed on their merchandise all represent relatively new developments in marketing to price- and image-conscious consumers. In addition, environmental, humanitarian and social concerns are becoming increasingly important factors in the decisions made by individuals, businesses and governments.

What does all this have to do with you? How might it affect your future?

In our fast-paced society, people are changing jobs more than ever before. It's not common anymore for workers to be employed in one job until they retire. Instead, they can be expected to change careers as often as once every five years. People have to be able to market themselves, and they need skills that will be useful to a variety of different employers.

Improvements in communications mean that new ideas can be transmitted around the globe almost instantaneously. By using systems like the Internet, it's possible to be electronically connected to a workplace that might be hundreds or even thousands of kilometres away from where you live. As a result, it's no longer necessary for workers to live in the same community, in the same province, or even in the same country as their employer, co-workers, or those who are competing with them in the job market.

Not so long ago, you could find a stable, well-paid job even if you didn't have a high school education. Specialized training was usually only necessary if you wanted to pursue a professional career. Planning for the future by researching the job market and the economy wasn't as critically important as it is today.

But things have changed. Job-seekers have to cope with a labour market that's radically different from what it used to be. The types of jobs that are available have changed. Mining, forestry, fishing and agriculture no longer dominate the economy to the same extent that

they once did. And even in these traditional industries, workers are expected to have different skills and more education than in the past.

Basic skills and a willingness to work aren't necessarily going to get you a job in today's economy. Neither will a university degree. The skills employers expect their workers to have are not the same ones they were looking for a few years ago. Getting a job will probably require some research on your part. If you've done your research and understand how the economy works, you'll be in a much better position to find the job that's right for you.

So, what do you need to know?

If you're planning to work in British Columbia, you need to know what kinds of jobs are available in the province, which industries are hiring new workers, and where you're likely to find an employer who needs someone with your skills and abilities. One way to do your research is to find out more about how BC's economy is structured, which industries employ the most people, how the economy has been changing, and how it's expected to change in the future.

Ultimately, your decision about the right career for you will be influenced by a lot of factors that can't be measured in terms of dollars and cents. Most people spend more time on the job than in any other activity in which they're involved. There are a lot of issues to consider when you're planning your career, including:

- What sort of lifestyle do you prefer?
- Are you prepared to work the long hours required in some occupations?
- Is earning a high salary the most important consideration for you?
- Are you willing to accept risks, or do you want a secure job in a safe environment?
- What sort of work are you most likely to enjoy?
- Can you sit at a desk all day, or do you like to do physical work?
- Would you rather work outdoors, or indoors?
- Do you like to work with your hands, to make things? Or do you find problem-solving more challenging than manual work?

These are just some of the kinds of questions that you need to ask yourself when you're looking at career options. Making sound decisions about your career involves first defining your goals, understanding your strengths and evaluating your skills, and then combining that knowledge with information about how the economy works.

That's where this book fits in. It contains a lot of the information you need in order to understand how BC's economy and labour market are structured.

Where can you find that information in this book?

We start out in Chapter 2 by defining some of the terms that are used to describe the economy. Then, there's a chapter that gives an overview of the BC economy: how it's structured; how it has changed since 1981; and what sorts of jobs are available. Of course, we can't accurately predict the future, but we've also included forecasts of what's expected to happen during the next few years. If you're looking for information about a specific industry, you'll find that in the two following chapters. Chapter 4 includes industry profiles for the goods sector, while Chapter 5 covers the service industries. There's a brief discussion of emerging trends and the new economy in Chapter 6, and we've given you some ideas about where you can find out more about the BC economy and labour market in Chapter 8. The final chapter describes the data sources that we've used in *A Guide to the BC Economy and Labour Market*.

Knowledge is power. The more information you have, the more likely it is that you will make the right decisions about your future. This book can help you make those decisions.

2. What do you mean when you say . . .

People use a lot of jargon when they're talking about the economy. Terms like GDP, production, output, productivity, and unemployment are often used to describe what's happening in the economy. These terms mean something very specific to some people, but don't necessarily have the same meaning for others.

It's important to understand what's meant when these terms are used in the rest of this book. That's why we've included these definitions and examples in this chapter:

Production and output

The value or amount of a good or service that's produced by a company or an industry is usually referred to as the industry's production or its output. For example, the output of a millworking factory that makes wooden doors could be measured in terms of either the number of doors produced, or the total dollar value of its products. It's important to note that output doesn't just include goods. Services like transportation, accounting, legal advice, and health care also contribute to the economy's total output.

The production process

The production process is simply a term that's used to describes how an industry's final product is created.

In the millworking example, the production process would include the following activities:

- sawing boards into pieces of wood that have the right dimensions;
- gluing, nailing or screwing the pieces of wood together into a door;
- sanding and painting or varnishing the door; and then
- shipping it to a building supply firm where it is sold to a customer.

Inputs

Inputs used in the production process include all the goods and services used by the company. Labour, capital and materials are the three main inputs used in production.

In our millworking example, the inputs include:

- raw materials (wood);
- goods produced by other companies (nails, glue);
- fuel and energy (electricity, oil or gas);
- labour; and
- purchased services (such as transportation from the factory to the building supply store).

Labour

Labour is just another name for work effort, or the amount of human resources used in production. It includes all types of workers with all sorts of skill levels, from farm labourers to tradespeople to doctors and office workers. The amount of labour that's used by an industry can be increased by either hiring more workers or boosting the number of hours worked by people who are already on the payroll.

Capital

Capital is just another name for machinery, equipment, factories, institutions, airports, railroad tracks, dams, and other structures or facilities used in production. Investment in new capital or more efficient use of existing equipment is one way of increasing an industry's output.

Gross domestic product (GDP), or value added

Gross domestic product (usually referred to as GDP) is a measure of the value added to the economy by an industry. It is usually expressed in millions of dollars, and the terms value added and GDP are often used interchangeably. GDP is the standard measure that's used to assess the state of the economy.

Measuring GDP

GDP is calculated as the difference between the value of an industry's total output and the cost of the materials, supplies and services consumed in production. Using the millworking example again, let's suppose that each door produced by the factory is sold to the building supply store for $300. The cost of the door includes:

- $110 for supplies like wood, glue, and varnish;
- $130 for the work done by the person who made the door; and
- $35 worth of electricity, transportation, accounting and other services purchased by the company.

The remaining $25 represents the profits of the factory owner. In this case, the value added resulting from the production of each door would be equal to the cost of the door ($300) minus the cost of materials and supplies, energy and purchased services ($110+$35), or $155.

It's important to note that the millworking factory's contribution to GDP only includes the **value** of the work that was **added** to the raw materials purchased to make the door. The work that's been done to produce the wood supplies, fuel and services used to make the door is attributed to the industries that produced them. In other words, at each stage of production, GDP only counts the value of the work that is done by that production process.

GDP is a measure of the value added to the materials or services purchased by the industry
Figure 1

GDP usually includes more than labour and profits, but we've simplified things a little in this example.

Economic growth

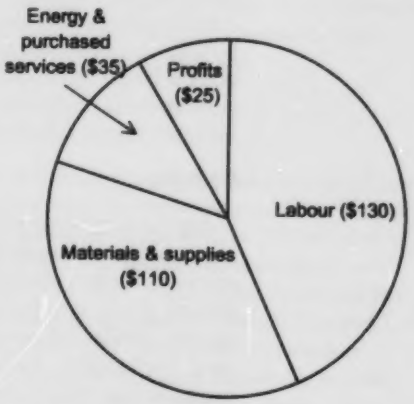
Economic growth is just another term for the percentage change in the size of the economy, as measured by GDP, over time (usually from year to year). Economic growth can be the result of increased use of labour and capital, or may be due to productivity improvements.

The economy regularly experiences ups and downs. This pattern of GDP growth and decline is often called the **business** or **economic cycle**. When the economy stalls, we usually describe it as being in a slowdown; when it's in a recession, that means that the economy has been shrinking for a period of at least half a year.

Productivity

Productivity can be described as a measure of the overall efficiency of the economy. Productivity improvements can be due to advances in technology, or to more efficient use of labour or capital.

Using our millworking example, suppose that the factory employs two people. Each of them saws the wood, nails or glues it together, then sands and varnishes or paints the finished product. Suppose further that the workers discover that if one of them does all the sawing, nailing and gluing, while the other one does the sanding and varnishing, they can produce one extra door per day. The amount of capital and labour used in the factory hasn't changed, but because the labour is being used more efficiently, the factory's output has increased. The growth in this case is due to increased productivity.



The industry's value added is $155 dollars

Figure 1

There are many ways to measure productivity gains, but one measure that's commonly used is called **labour productivity.** It is calculated as the ratio of GDP to total labour input. Some of the graphs in this book show indices (defined below) of GDP and employment. The gap between these indices can be viewed as a rough measure of changes in labour productivity.

Industries

Businesses that produce similar types of goods or services are usually grouped together into industries.

A classification system called the **Standard Industrial Classification (SIC)** is used to determine which industry a particular business establishment belongs to. The classification is based on the main product that's produced or sold by the establishment.

The SIC is hierarchical. There are many small industries that have been defined within each of the main industry groups. In the example we used earlier in this chapter, the millworking factory would be classified as part of the sash, door and other millworking industry, which in turn is part of the wood industry, a sub-group of manufacturing.

You'll find more details on how industries are defined in Appendix 1.

Classification systems are periodically reviewed to ensure that they're up to date. We're currently in the process of converting to a new industrial classification system called the North American Industrial Classification System, or NAICS. However, the data we've used in this book is based on the SIC. (NAICS is discussed in more detail in Chapter 9).

Sectors

Industries producing related goods or services are sometimes grouped into **sectors.** The economy is often divided into two large sectors: goods and services. Within these sectors, smaller industry groupings may also be used. For example, the logging industry produces logs, which are sawed into wood by the wood industry, or chipped and turned into pulp or paper by the paper industry. Because they are related, these industries are often grouped together into what's called the forest sector.

Primary industries

These are industries that involve the harvesting or extraction of natural resources. Fishing, logging, mining and agriculture are all considered primary industries.

Secondary industries

Manufacturing (both resource and non-resource-based), construction, and utilities which distribute electricity, oil, gas and water, are often referred to as secondary industries.

Value-added manufacturing

This term is sometimes used to describe manufacturing activities that involve more processing than simply turning logs into boards or chips. Producers of doors and windows, for example, are considered to be value-added manufacturers. Some manufacturing industries aren't based on processing natural resources. They produce electronic products, trucks, books and magazines, toys, or other manufactured goods. They're all part of what's often called value-added manufacturing.

Goods sector

This includes all primary and secondary industries. An industry that harvests, extracts or transforms raw materials into a product that can be handled or stored is a goods-producing industry.

Service sector

A wide variety of industries ranging from transportation, communication, real estate and financial services to retailing, hairstyling, education, health and public administration are included in the service sector. Industries are treated as part of the service sector if their major product is not something solid that can be handled or stored.

Measuring GDP in service industries

We're used to thinking about GDP in terms of goods production: making doors or computers, building ferries, constructing houses, or publishing books and magazines. But that's only part of the story. There's value added to the economy when you visit a barber or hairstylist to get your hair done, when you buy a meal at a restaurant, travel on a bus or airplane, go to a movie theatre, or when you visit a doctor. In some cases (as in our millworking example), it's easy to calculate the GDP resulting from a particular activity. That's because the economic activity that's being

measured involves transforming basic materials into a finished product. We can determine the value of the final product and the cost of the materials, supplies, energy and services used to produce it relatively easily.

But how do you measure the economic output of a service like health care, education or defence? For these types of services, there isn't a single product or group of products that you can count or measure to put a value on the industry's output. Yet health care, education and government services employ a lot of people whose job is to provide services that are both needed and valued by society. In cases like this, we usually base our estimate of GDP on the value of wages and salaries earned by workers in the industry, supplemented by other information (for example, data on the amount of capital equipment that's used) if it's available. The reason for using labour income is that it's one way of measuring the value that's placed on the work done by the people who provide these services.

The result of all this is that, for some service industries, there's a very strong relationship between GDP and wages. Because of this, the ratio of GDP to employment (i.e., labour productivity) in these industries is more or less constant over time.

The new economy: tourism and high tech

Tourism and high-tech are part of what's often called the new economy. Firms in these sectors don't belong to a single industry or group of industries. They produce many different types of goods and services, and thus span a number of different industries. In the case of tourism, the element that ties them together is the clients that they serve. In the high tech sector, it's the degree to which the goods and services they produce could be considered high tech products.

Because their products are so diverse, tourism and high tech aren't included in the standard industry definitions used in the SIC, or in NAICS, the system which is replacing the SIC.

We measure the size of the tourism and high tech sectors by attributing part of the output of other industries to these special groupings. For example, some, but not all, of the output of the food and beverage service industry is attributed to tourism.

The work that's been done in this area is fairly recent, and there's still some discussion about what should be included in tourism and high tech. At present there's not a lot of data that's based on these special groupings.

In this book, we'll mainly be talking about goods and service industries, using SIC definitions, because that's how most of the information is reported.

High tech

BC's **high tech sector** includes a portion (which varies by industry) of the activities of firms in a variety of manufacturing and service industries, which produce electronic equipment, robotics, computer consulting services and other goods and services that involve a high degree of research and development activity.

Tourism

The **tourism sector** includes part of the activities of a variety of industries producing services that are used by tourists. It includes a percentage of the total value of production in industries such as accommodation, food services and transportation.

Imputed rental income

Imputed rental income is an estimate of how much rent a homeowner would have to pay for the house he or she lives in. It's included in GDP because the homeowner could have chosen to rent out his or her house and live in rented accommodation instead. The idea is that GDP shouldn't be affected by whether homeowners rent their homes out to other people or live in them themselves.

Direct and indirect effects: relationships between industries

It's also important to distinguish between the **direct** and **indirect effects** of an industry on the economy. For example, think about what's involved in producing paper. First, a logger has to cut a tree down. Then, it is transported to a mill (a service that may be provided by the transportation industry), chipped and turned into pulp which is further processed into paper (manufacturing). In the example just given, the **direct effect** can be measured in terms of the

value added or employment provided by the paper manufacturer. The **indirect effect** is a measure of the resultant increase in the activity of the industries that produced goods and services used by the paper industry. In this example, the indirect effect would include the increased output of:

- the manufacturer of the chainsaw used by the logger;
- the logger who cut down the tree;
- the transportation company that shipped the log to the mill; and
- the mill that converted the log into chips which were then sold to the paper manufacturer.

Constant (real) dollar estimates

GDP estimates are usually expressed in **constant or real dollars**. "Constant dollars" is just another way of saying that a number has been adjusted to remove the effects of inflation. Constant dollars are used to separate increases in the value of production which are due to inflation from those which are due to actual increases in the quantity of a good or service produced. All of the GDP numbers in this book are expressed in constant dollars. The current base year is 1992.

Adjusting for inflation (price changes): calculating constant dollar estimates

Let's take an example: suppose a pair of runners cost $50 in 1992. Suppose further that the same pair of runners would cost $100 in today's (2000) market: the price has doubled. The increase in the price of the runners is called **inflation**.

Suppose further that the store you bought the runners at sold $50,000 worth of these shoes in 1992. Its sales doubled to $100,000 in 2000. Does this mean that it has doubled its business? The answer to that question is no. The business sold the same number (1,000) of shoes in each year, but that's not obvious when the sales are valued in current (2000) prices.

	1992	1996	2000
Price of runners ($)	50	80	100
Price index (1992=100)	100	160	200
Pairs of shoes sold	1,000	980	1,000
Sales in current $	50,000	78,400	100,000
Sales in constant 1992 $	50,000	49,000	50,000

Table 1

You can take out the effect of the price increase by expressing the value of shoe sales in constant dollars. You can calculate that by multiplying the base year (1992) price of $50 by the number of shoes sold (1,000) in 2000 to get the constant dollar value of sales, which is $50,000 in 1992 dollars. When you compare that to sales in 1992, you can see that the store hasn't sold more shoes. All of the increase is due to inflation.

Indices

Indices are often used to show how the value of something changes over time. They are calculated by taking the ratio of the value of a given series in the current period to its value in the **base year,** the year that's being used as the basis for the comparison. The series is then multiplied by 100, so that the base year is set to that value.

In our running shoe example, the price of the runners increased from $50 in 1992 to $100 in 2000. Let's suppose the runners cost $80 in 1996. An index of the price of the runners could be calculated by dividing the prices in 1992, 1996 and 2000 by 50, the cost of the runners in our base year of 1992, and then multiplying by 100 (see Table 1).

Employment (work force)

Employment is often measured in terms of the number of people working in a particular industry. In this book, the terms **work force, jobs** and **employment** are all used to describe the number of people who work in a particular industry or sector.

Full-time and part-time employment

Employment counts don't necessarily tell the full story, because not everyone who has a job spends the same amount of time at work. Two

part-time workers who each work half a week don't do twice as much work as one full-time worker, even though they are counted as two employees.

Full-time workers are people whose jobs involve at least 30 hours of work each week. People who are employed **part-time** spend less than 30 hours a week on the job.

Self-employment

A lot of people who have jobs aren't employed by companies or organizations. They are self-employed, which simply means that they work for themselves. Self-employment can occur in all sorts of different jobs and industries. People who run corner stores or other small businesses, farmers, fishers, lawyers, housekeepers, gardeners, doctors and people in many other professions can be self-employed.

Many self-employed people work on their own or with unpaid help from family members. Others, however, have paid employees who work in their business with them.

Labour force

The labour force includes everybody who is either working or looking for work. The number of people in the labour force is always greater than the number of people with jobs, because there are some people who are looking for work but can't find jobs. Most of the time, we use employment statistics in this book, but in some cases we've used data on the size of the labour force.

Unemployment

Unemployment statistics are based on a survey in which people are asked if they are currently employed. If they don't have a job, they are asked whether they are actively looking for work. Those who are looking for work are counted as unemployed, and they're included in the labour force. If they're not looking for work, they're excluded from the unemployment statistics.

Being unemployed doesn't necessarily mean that you are receiving Employment Insurance (EI) benefits. Many people who are unemployed receive EI, but others don't. They may be living off their savings, they're supported by relatives or friends, or they're on social assistance.

Unemployment rate

The **unemployment (jobless) rate** is calculated as the ratio of the number of people who are unemployed (i.e., looking for work) to the total labour force.

Occupations

Each industry or sector in the economy employs people in a variety of different occupations. Types of jobs are classified based on the amount of skill or training needed to do them, as well as on the specific characteristics of the job. For example, people working in building trades might have the same amount of training or skills as office workers, but because their jobs are so different, they are classified into different occupational groups.

You'll find an explanation of how occupations are classified, and what's included in the various classifications, in Appendix 2.

Establishment

When we talk about a business establishment, we're referring to the smallest operating entity for which financial records are reported. Usually, that's the same as the physical location where a company operates. Some companies (like hair salons, clothing stores, or fish farms) might have only one establishment. Other companies, however, can have many establishments in different parts of the province. For example, The Bay is a single retail company that has many different business locations, or establishments, in BC and other parts of Canada.

Establishment size is often measured in terms of the number of people who work at a particular job site. Those with fewer than 20 employees are considered to be small businesses. Establishments with 20-100 employees are mid-size, and large establishments have 100 or more workers on staff. In some industries, most of the jobs are in large establishments. In others, you're more likely to be one of a small group of workers.

While statistics on employment by establishment size don't include a count of the

self-employed, people in that type of work arrangement are usually operating a small business.

Regions

You'll notice that in the chapters describing BC's industries, we talk about the regions of the province. The province has been divided into eight regions, which are called Development Regions. They are: Vancouver Island/Coast, Mainland/Southwest, Thompson-Okanagan, Kootenay, Cariboo, North Coast, Nechako and Northeast. Because they're so small, North Coast and Nechako have been aggregated into one bigger region in the data we've used to make the comparisons.

There's a map showing the boundaries of these regions in Appendix 3.

Let's take a look at how BC's economy is structured.

3. An introduction to BC's economy

This chapter describes some of the main characteristics of BC's economy. We'll start with a brief overview of the province's economy and how it has changed over time, then we'll look at the job market, and compare trends in employment and GDP (gross domestic product). You'll get a brief overview of the industrial structure of the economy, the sorts of jobs British Columbians have, some of the characteristics of the work force, and how the labour force is distributed around the province. We'll also take a look at what's expected to happen in British Columbia during the next few years.

BC then...

British Columbia used to be one of the "last frontiers" in Canada: a rough, tough region populated mainly by young men, many of whom were loggers and miners. A hundred years ago, just two percent of all Canadians lived in this province. More than half of the population was under thirty, and men outnumbered women nearly two to one.

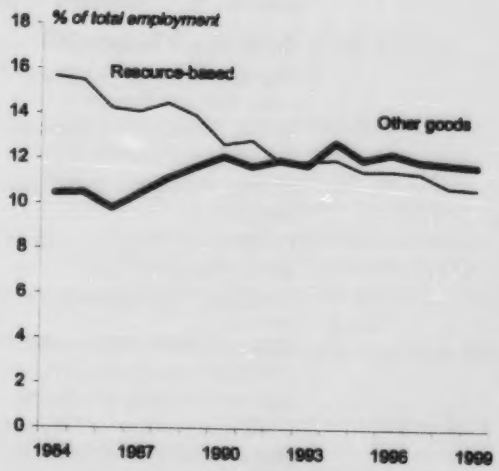
At the end of the nineteenth century, BC's economy was highly dependent on resource-based industries such as logging, mining, fishing and agriculture. Manufacturing activities were based on the processing of natural resources: canning Fraser River salmon, or producing lumber and paper from trees harvested in the province's coastal and interior forests. This early dependence on primary industries helped forge an image of BC that persists to this day. Most people, when asked to name the biggest industries in the province, continue to put forestry, mining, fishing and agriculture at the top of the list.

Resource industries are becoming less prominent. They currently employ about 11% of British Columbia's work force
Figure 1

...and now

The province has changed a lot since the early days of European settlement. With 13% of the Canadian population, it's Canada's third biggest province, after Ontario and Quebec. It produces about 12% of the country's total GDP. Vancouver's population has passed the two million mark, making it one of only three metropolitan areas in the country with a population in excess of two million. The city is gaining prominence as a financial and industrial centre.

The composition of BC's population is changing too. It's no longer mainly comprised of young men, as it was a hundred years ago. The percentage of males and females living in BC has been roughly equal since the 1960s. The population's also older: less than 40% of British Columbians are currently under the age of thirty. The cultural mosaic is shifting as more and more immigrants are coming to the province from Asia and other non-European areas. This has had an effect on the economy, as a variety of new types of goods and services are being produced to meet the needs of an increasingly multicultural population. Technological and cultural changes have also had a big effect on the way the economy's developed.



Source: Labour Force Survey

Figure 1

BC's economy is continuing to change as it matures into a more diverse, less resource-

dependent structure. Primary goods production is giving way to a greater emphasis on value-added manufacturing and services. Forestry, mining, fishing and agriculture are still important, especially in communities where they are the biggest employers, but they no longer dominate the economy. Since the mid-1990s, there have been fewer people working in these industries than in other types of goods production. And, for every person who's employed in the goods sector (resource and non-resource-based), there are three British Columbians who have jobs in service industries.

Most jobs are in the service sector...

There are three service-sector jobs for every one in the goods industries
Figure 2

People who work in the service sector are engaged in a broad spectrum of activities, ranging from real estate and finance to retailing and hairstyling. Some work in industries that have close ties to goods production, providing services such as transportation, wholesaling, retailing and insurance to manufacturers who must transport their products from the factory gate to markets where they can be bought and sold. These industries aren't completely dependent on the goods sector, however. For example, the railway system is primarily used to move cargo, but it also transports people. Truck companies carry freight, but may also transport household goods. And airlines ship a lot of cargo, but derive the bulk of their revenues from passenger traffic.

Other people work in industries that provide real estate, financial, legal, accounting, and other services that are used by businesses as well as individuals. Others are in the personal service industries, staging plays or showing movies, selling lottery tickets, or providing services such as drycleaning or hairstyling. Health care, education and defence are all service industries that can be viewed as benefiting the community at large.

Many of these services have been part of the province's economic makeup since the first settlements came into being. Others, such as computer services or Internet providers, are part of what's often called the *new economy*.

It's important to remember that the goods and service sectors are interdependent. Some service sector industries wouldn't exist without the goods sector. Likewise, some goods industries couldn't exist without services to support them. That's why you need to know how the economy works. If you understand the interdependencies, you'll be better able to predict which industries are most likely to be affected (and how) by changes in people's tastes, habits and needs, and that is, after all, what ultimately drives the economy.

Total employment in 1999: 1.9 million

Source: Labour Force Survey

Figure 2

...and they're not all entry-level positions

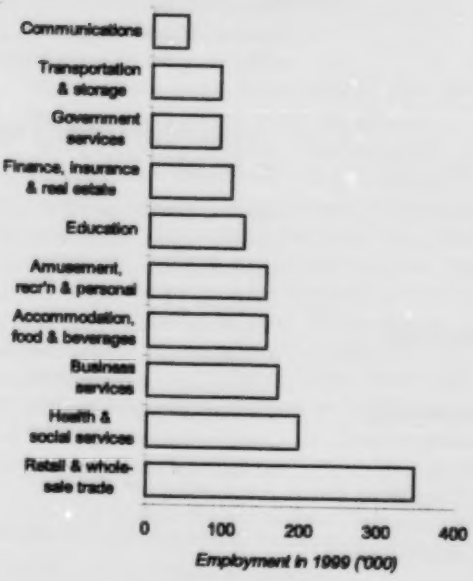
Service sector jobs are often thought of as poorly paid entry-level positions. But the stereotype of a service sector worker as someone who works at a fast food outlet, has little training, and just manages to scrape by on minimum wages isn't accurate. Yes, there are many entry-level positions and lower-paid jobs in the sector, but service sector jobs exist at all points along the pay scale. Many workers—engineers, computer scientists, doctors, lawyers and university professors, to name a few—are both highly trained and well paid for their work. So are airline pilots, longshore workers, ferry and railway workers, and numerous others who work in service industries. Even fast-food workers might need more training than you'd think—they might have to use a computer or other specialized equipment on the job. Almost every person in the work force has been affected by new technologies that require special skills.

Where are the jobs?

Most jobs are in the service industries

Figure 3 shows where the jobs are in the service sector. (You'll find more information on how industries are classified in Appendix 1). As you can see, retail and wholesale trade is the biggest employer in the service sector–and BC's economy. It employs one in every four service sector workers. Health and social services is the second largest employer, followed by business services. Accommodation, food and beverages, and other services employ almost as many people as the business services industry.

One in four service sector jobs is in retail and wholesale trade
Figure 3



Source: Labour Force Survey

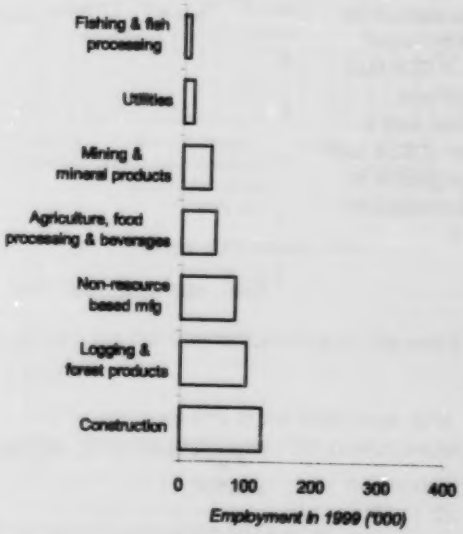
Figure 3

Nearly three times as many people work in retail and wholesale trade as in construction, the largest employer in the goods sector. The two biggest industries in the service sector—retail and wholesale trade and health and social services—together employ more people than all of the goods-producing industries combined.

In the goods sector, construction and forestry are the biggest employers
Figure 4

Construction is the biggest employer in the goods sector

Figure 4 ranks industries in the goods sector based on employment. About a third of the jobs in this sector are in construction. Forestry, which includes logging and wood and paper manufacturing, is the second largest industry, employing one in four workers in the goods sector. Other major employers include non-resource-based manufacturing, and agriculture and related industries. One in ten workers in goods-producing industries is employed in mining or mining-related manufacturing, while fishing and fish processing employs one in every 50 workers.



Source: Labour Force Survey

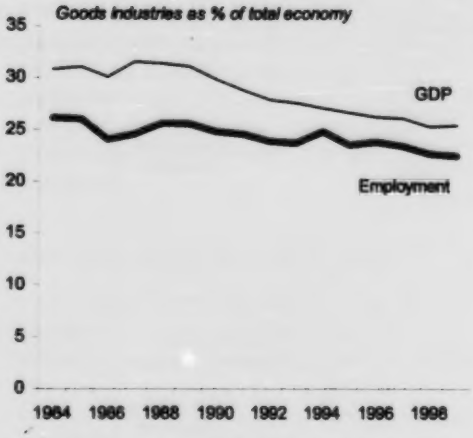
Figure 4

So most of the jobs are in the service sector. What about GDP?

In the previous chapter, we said that GDP, or value added, is the measure that's most often used to describe the economy. Do the GDP figures tell the same story about the relative importance of the goods and service sectors as the employment numbers? The answer to this question is yes. In 1999, about a quarter of the province's GDP originated in goods production, while three-quarters came from the service sector.

Figure 5 shows how the basic structure of BC's economy has changed since 1984. As you can see, the province's economy hasn't always been as service-oriented as it now is. In 1984, there were three service-sector workers for every person employed in goods production. By 1999, the ratio had increased to four to one. The goods sector's share of total GDP has

fallen from a third to a quarter of the total during this period. The relative size of the goods sector has been shrinking since the 1960s, when estimates of GDP by province were first produced.



Goods account for a slightly larger share of GDP than employment. However, only a quarter of BC's total GDP originates in goods production
Figure 5

Source: Statistics Canada

Figure 5

Wages tend to be higher in the goods sector...

The graph also illustrates another interesting phenomenon. The goods sector's share of total GDP is consistently higher than its share of employment. This might seem puzzling. How is it that just over a fifth of the work force can produce nearly a quarter of the economy's total output?

One explanation is that **labour productivity** (GDP per worker) in the goods sector tends to be higher than in the service sector. This reflects, among other things, the fact that workers in the goods sector are usually paid more than people with jobs in service industries. Labour income is one of the biggest components of an industry's GDP.[1]

In 1999, British Columbians working in the goods industries earned an average wage of $18.82 per hour. The typical wage for hourly-paid workers in service industries was more than four dollars lower, at $14.40 per hour.

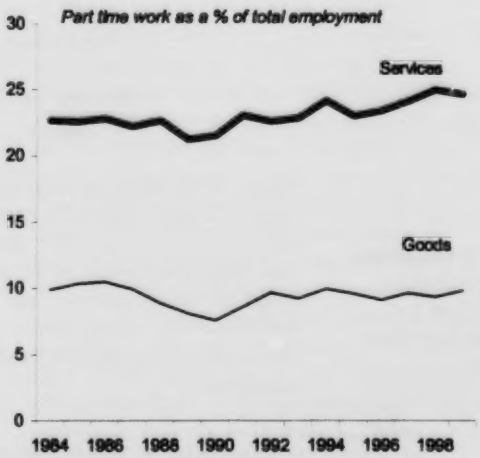
[1] In the previous chapter, we talked about how the ratio of GDP to employment can be viewed as a rough measure of labour productivity. You'll also find an explanation of what's included in GDP and how it's measured.

Why do wage rates differ?

Wages can be viewed as a measure of the value that's placed by a producer on the work done by his/her employees. People who receive higher wages generally do so because an hour of their work makes a greater contribution (i.e., adds more value) to total economic output. Otherwise, there would be no reason why employers, who usually want to keep their costs down, would choose to pay them more. Many factors such as the nature of the job, working conditions, risk and training, hours of work, and the type of equipment that's used in production also have an effect on the value added to the economy by each worker. These factors all contribute to wage differences in various industries and among workers in different types of occupations.

...and workers usually spend more time on the job

Another factor contributing to the goods sector's higher share of GDP is related to the way we measure employment. The employment numbers we've used in these comparisons are simple job counts, and they don't differentiate between full-time and part-time workers. This means that the relationship between GDP and total employment can be a bit misleading as some industries rely more heavily on part-time or seasonal employment than others do.



One in four service sector jobs involves part-time work. The ratio's a lot lower in the goods sector
Figure 6

Source: Labour Force Survey

Figure 6

There are big differences between the use of part-time workers in the goods and service

sectors. Part-time employment is quite common in the service sector, where one in four workers work less than 30 hours a week. In the goods industries, relatively few (one in ten) workers are employed part-time. Furthermore, the incidence of part-time employment has been increasing in the service sector, but has remained more stable in the goods industries.

More than a quarter of BC's workers are in sales and service occupations
Figure 7

A typical service sector worker spends 29 hours a week on the job. In the goods industries, the average work week for hourly-paid employees is 39 hours long.

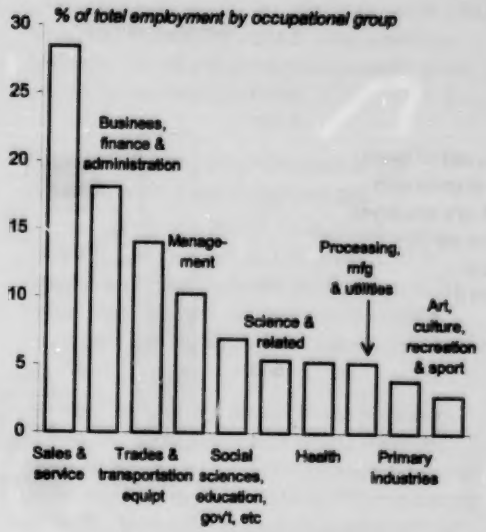
What are the most common occupations?

Each industry employs people in all sorts of different occupations, which can involve a broad range of skill levels. Take the health care industry, for instance. It employs managers, doctors, nurses, other health care professionals, trained technical workers like x-ray technicians, and cooks, cleaners, and laundry workers. And these are just some of the occupations that are represented in this industry. While some of them (such as managers and administrators) could work in any industry, others have skills or training that are very specific to health care services.

There are ten broad occupational groups that are used to describe the different types of jobs that people could have. You'll find a detailed description of them in Appendix 2.

More than a quarter of the workers in BC are employed in sales or service occupations. This includes workers in retailing, food service and accommodation, as well as workers in protective and other service occupations. Examples of the types of jobs in this category include sales people, clerks, chefs, cooks, butchers, bakers, police officers, tour guides and child care workers.

Workers in business, finance and administrative occupations make up almost a fifth of the work force, while one in six are employed as tradespeople (mechanics, plumbers, pipefitters, carpenters, longshore workers, labourers, and so on) or transportation equipment operators.



Source: COPS Estimate (1998)

Figure 7

What are the characteristics of the work force?

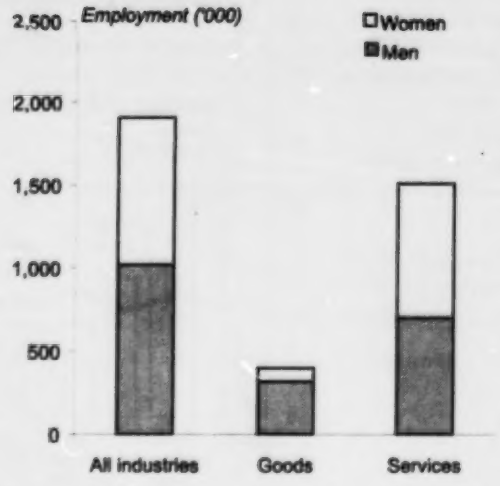
Women make up 45% of the work force. Almost all of them are employed in the service sector.

The male-female composition of the province's work force is almost equal. About 55% of the workers in BC are men, while the remaining 45% are women.

However, as you can see in Figure 8, women are much more likely to work in service industries than in the goods sector. Nine out of every ten women who have jobs are employed in the service sector. While there are many reasons for this difference, it is partly related to the nature of work in some goods-producing industries. Women may be less likely than men to choose a job that requires a lot of physical strength, or involves long periods of time spent away from home at a job site where there are not many amenities. These types of jobs are more commonly found in the goods sector than in service industries. A growing number of women are working in non-traditional jobs, but it may be more difficult to obtain these types of positions in some industries.

In the goods sector, only 20% of the workers are female. In contrast, more than half of the workers who have jobs in service industries are women. To put it another way, nine out of every ten women—and two out of every three men—with jobs work in the service sector.

Nine out of every ten women with jobs are employed in the service sector
Figure 8



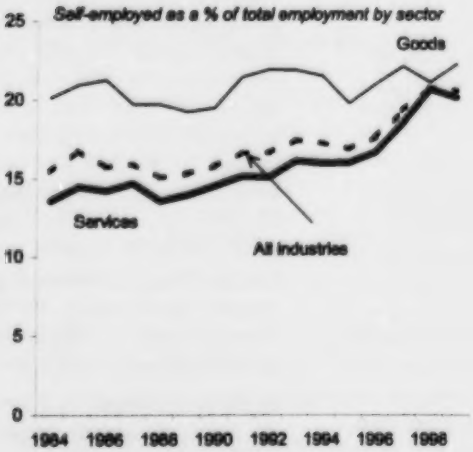
Source: Labour Force Survey (1999)

Figure 8

Self-employment has mushroomed in the service industries

Self-employment has historically been most common in the goods industries, largely because so many farmers, fishers and loggers are self-employed. In goods industries as a whole, the self-employment rate has remained close to 20% since the mid-1980s. However, as Figure 9 illustrates, the increase in self-employment that's been seen in BC during the last fifteen years comes from the service sector, where the percentage of people who are their own bosses has mushroomed, growing from 14% in 1984 to 21% by the end of the 1990s. This type of working arrangement is now almost as common in the service sector as in goods-producing industries. For the economy as a whole, the percentage of self-employed workers has risen from 16% to 21%, which is quite a significant change over a relatively short time span.

One in five BC workers is self-employed
Figure 9



Source: Labour Force Survey

Figure 9

Men are nearly twice as likely to be their own bosses as women are. One-fourth of the male work force was self-employed in 1999. This compares to one-sixth of all employed women.

Unemployment rates tend to be higher in the goods sector

We've talked about which industries employ the most people, and described some of the characteristics of people working in the goods and service sectors—the kinds of jobs they have, whether they're self-employed or work for other people, and whether they're more likely to be male or female. In this section we'll look at another important characteristic of the labour market: the unemployment rate, and how it varies among industries.

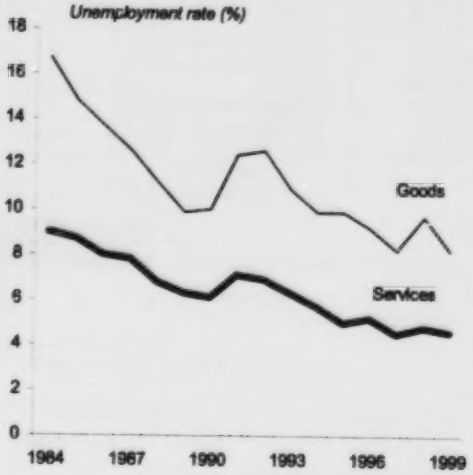
Unemployment rates are affected by many factors. For example, people with jobs in industries such as agriculture, fishing, and construction may not be able to work during the winter months because of weather conditions. In other industries, people won't face the same likelihood of being jobless on a regular basis because the weather doesn't affect their ability to work.

Seasonal factors also have a big effect on unemployment rates. For instance, retailers may need extra staff for the pre-Christmas season but require fewer workers at other times of the year. Hotels might hire additional help during the busy summer months, but lay these workers off during slower periods. People who work in industries where the demand for goods and services is seasonal may also face a higher-than-average likelihood of experiencing periods of unemployment.

In industries that produce goods mainly for export to other countries, unemployment rates can be affected by changes in world demand for their products. For example, most of BC's wood exports are destined for use in housing construction in the US and overseas. That means that changes in the housing market or

other economic conditions in these regions can affect the demand for BC wood products. This may lead to layoffs and shutdowns, or to job growth and overtime work, depending on what the situation is. Similarly, changes in the state of BC's housing market will affect the need for workers in residential construction. These are just a few of the many factors that cause unemployment rates to vary among industries.

Unemployment rates are higher, and more volatile, in the goods sector
Figure 10



Source: Labour Force Survey

Figure 10

People who work in goods-producing industries face a significantly higher likelihood of being unemployed at some point than their service-sector counterparts do. This is especially true during economic downturns. That's because goods-producing industries tend to cut back on their production when markets are weak. While some service industries are also affected in this way, many of them provide services for which there is a demand even when the economy stalls. The strength and size of BC's service sector is almost certainly what prevented the economy from slipping into a recession in the late 1990s, a period when the province's goods-producing industries did not fare well.

Figure 10 illustrates the close relationship between the economic cycle and unemployment in the goods sector. As you can see, the jobless rate in the goods sector rose sharply during the economic slowdown in 1991 and didn't fall back to its pre-1991 level until three years later. The unemployment rate also rose in the service sector, but not nearly as much. Similarly, there was a spike in the unemployment rate in the goods sector in 1998, when BC's economy stalled. That slowdown had only a small effect on the unemployment rate in the service industries.

Four out of every ten employees in the province work in small businesses

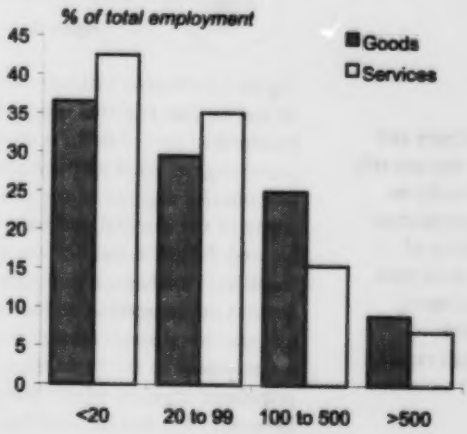
Of the 1.5 million British Columbians who have a job but are not self-employed, 41% work at an establishment with fewer than 20 employees. These small businesses employ more people than any other business size in the province.

Another 34% of employees in the province have jobs at establishments where there are between 20 and 99 workers. Seventeen percent are in larger businesses (100 to 500 employees) while 7% have jobs in establishments with at least 500 employees.

Establishment sizes tend to be a little smaller in the service sector than in the goods-producing industries, where more than a third of all employees work at large establishments (those with at least 100 employees).

It should be noted that these figures don't include people who are self-employed. About 60% of self-employed people in both the goods and service sectors don't have any paid workers. Therefore it's virtually certain that most self-employed workers should be included in the small business category (fewer than 20 workers).

Small businesses are the biggest employers in both the goods and service sectors
Figure 11



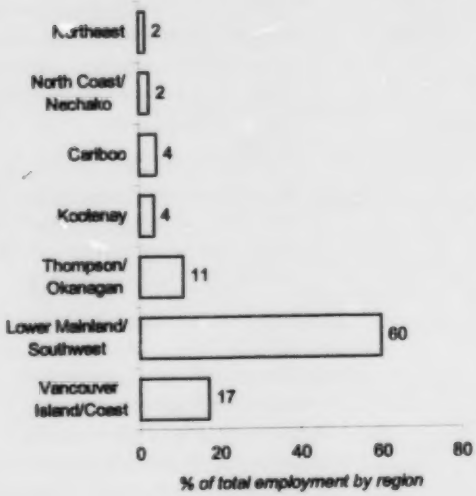
Source: Labour Force Survey (1999)
Excludes self-employed workers

Figure 11

Where are the jobs located?

Three out of every four jobs in BC are located in the Lower Mainland (60%) and Vancouver Island (17%) areas. This is hardly surprising, as these two regions[2] also contain most of the province's population. Another 11% of the people with jobs are working in the Thompson/Okanagan region—the area around Kamloops, Kelowna and Penticton. Cariboo (4%), Kootenay (4%), North Coast/Nechako (2%) and Northeast (2%) each employ a relatively small percentage of the province's workers.

Most of the jobs are in the Lower Mainland and Vancouver Island areas, reflecting the geographic distribution of BC's population
Figure 12

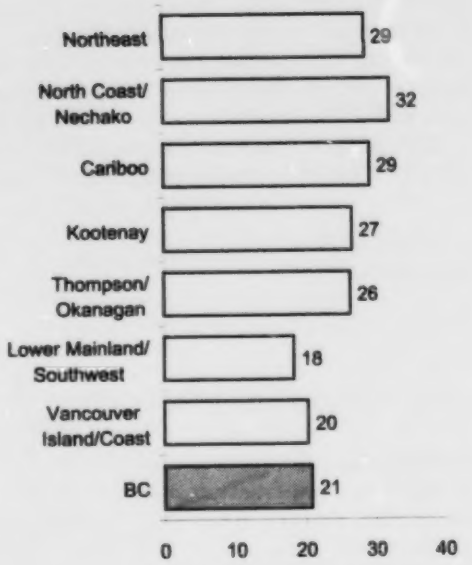


Source: Labour Force Survey (1999)

Figure 12

Figure 13 illustrates differences in the structure of the various regional economies. Goods production accounts for a much bigger percentage of total employment in the northern and interior regions of the province, where many of the mineral and forest resources are located. Nearly a third of the jobs in the Cariboo, Northeast and North Coast/Nechako regions are in goods-producing industries. They account for a much smaller percentage of total employment in the three most densely populated regions, where services provide between 74% and 82% of the jobs.

The northern and interior regions rely more heavily on goods production as a source of employment than the southwest, coast and Okanagan regions
Figure 13



Source: Labour Force Survey (1999)

Figure 13

What's the outlook to 2008?

BC's economy, as measured by real GDP, is expected to increase by 25% between 1999 and 2008. The service sector is forecast to grow 26%, to $86.4 billion (in 1992 dollars). The increase in the goods sector is unlikely to be as strong. Total growth is anticipated to be about 21%, with total GDP increasing to $28.3 billion by 2008.

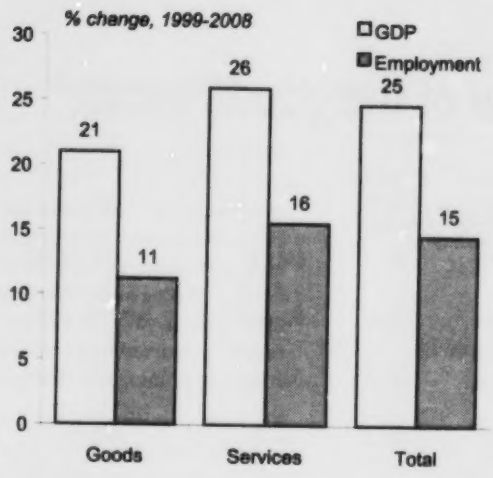
However, employment growth isn't expected to keep pace with the increases in GDP, suggesting that most of the growth will be due to productivity gains.

Total employment in the goods sector is forecast to reach 475,500 by the year 2008, an increase of 11% relative to 1999. Job growth in the service sector is expected to be stronger (+16%), but will still lag behind GDP growth. Total employment in service industries is forecast to increase to 1,708,400 by 2008.

To put that into perspective, it's expected that the number of *service sector* workers in the year 2008 will exceed the total number of workers in BC in 1993. Nearly 80% of the jobs in the province will be in the service sector.

[2] A map showing the boundaries of BC's eight development regions can be found in Appendix 3.

The service sector is forecast to continue to grow more rapidly than goods-producing industries
Figure 14



Source: COPS forecast

Figure 14

What comes next?

Up to now, we've talked a lot in general terms about how the British Columbia economy is structured, and we've compared employment, GDP and various characteristics of workers in the goods and service sectors. It's important to understand the big picture, but you should also have a good understanding of what's happening, and what's expected to happen, within these sectors. In the rest of this book, we'll take a look at what's happening in specific industries within the goods and service sectors.

We'll start by describing each of the province's major goods industries and then go on to discuss what's happening in services. For each industry or sector, we've included information, where possible, about:

- How it developed
- What's included in the sector
- What's happened since 1984, and the sector's size relative to the total economy in terms of both GDP and employment
- The most common occupations in the industry
- How many people work in the industry, and how much they earn
- Various characteristics of the work force, such as:
  - the male/female composition of the work force
  - whether jobs are part-time or full-time
  - unemployment rates
  - self-employment
- Establishment size
- Where the jobs are located
- The outlook for employment and GDP in the industry up to 2008

Although most of the information is available by industry, there are a few holes in the data, especially for some of the smaller industries.

We hope that this information will help you make better decisions for your future.

4. An overview of the goods sector

There are seven main industry groupings, or sub-sectors, within the goods sector:

1. Construction
2. Logging & forest products
3. Non-resource-based manufacturing
4. Agriculture, food & beverages
5. Mining & mineral products
6. Utilities
7. Fishing & fish processing

Table 1 shows the ranking of these industries, based on employment in 1999. Also included in the table are estimates of real GDP. As you can see, the biggest employer is construction, with 124,700 workers. Forestry (100,900) is ranked second and non-resource-based manufacturing (83,100), third among the goods-producing industries.

Only a quarter of the province's work force is employed in goods industries. In fact, five of the ten service industry groups in BC had more employees than the construction industry did in 1999.

We've grouped some industries that produce similar products together in this book. For example, logging and forest products includes the primary activity (logging) as well as related manufacturing (wood and paper production). Food and beverage manufacturing is associated with agriculture; and fish processing, with fishing. Mining and mineral products includes mining, quarrying, oil and gas production, and related manufacturing activities such as metal smelting, refining and fabricating.

Non-resource-based manufacturing includes all manufacturing activities that don't primarily involve the processing of natural resources. This covers a broad range of activities, from electronics manufacturing to clothing factories.

You should note that ranking the industries based on their share of employment gives a different result from a ranking that's based on their share of total GDP. For example, mining and mineral products is the fifth largest employer in the goods sector, but would be third if GDP were used as a basis for comparison. This is because, as we've discussed in previous chapters, the labour productivity of workers varies among different industries.

Table 2 on the following page summarizes some of the key economic and labour force variables for industries within this sector.

Let's take a look at some of the industries in the goods sector.

Goods Sector (1999 data)	Employment	% of total employment	GDP ($1992 million)	% of total GDP
Construction	124,700	6.5	5,727	6.2
Logging & forest products	100,900	5.3	5,630	6.1
Non-resource based mfg	83,100	4.4	3,438	3.7
Agriculture, food & beverages	51,500	2.7	2,140	2.3
Mining & mineral products	43,400	2.3	3,751	4.1
Utilities	15,600	0.8	2,358	2.6
Fishing & fish processing	8,400	0.4	315	0.3
Total, goods sector	**427,500**	**22.4**	**23,359**	**25.4**
Total, service sector	1,478,900	77.6	68,606	74.6
Total, all industries	**1,906,400**	**100.0**	**91,965**	**100.0**

Data source: Labour Force Survey, COPS Statistics Canada

Table 1

Goods industries... at a glance

	1999 data				Average (1990s)			
	Employ-ment	GDP ($1992 million)	Average weekly earnings	Average weekly hours	% Full-time	% Self-employed	% Male	Unemploy-ment rate
Construction	124,700	5,727	697	37	88	39	88	14
Logging & forest products	100,900	5,630	899	40-41	95	20	87	17
Non-resource-based mfg	83,100	3,438	640	39	94	8	77	7
Agriculture, food & beverages	51,500	2,140	579	36	76	52	58	12
Mining & mineral products	43,400	3,751	759	41	~90	20	86	0
Utilities	15,600	2,358	996-1,015	37	~90	0	72	0
Fishing & fish processing	8,400	315	na	na	na	20	81	19
Total, goods sector	**427,500**	**23,359**	**793**	**39**	**90**	**18**	**80**	**10**
Total, service sector	1,478,900	68,606	583	29	77	17	47	6
Total, all industries	**1,906,400**	**91,965**	**625**	**31**	**80**	**18**	**55**	**9**

Table 2

Construction

During the early 1990s, BC had the fastest-growing population in Canada. Record numbers of people were moving here from other provinces and countries, providing a stimulus for economic growth. In recent years, the influx of people into BC has slowed, and the province has fallen from first to fourth place in the country in terms of its population growth. Despite the slowdown, BC's population expanded by more than a third (37%) between 1984 and 1999. The Canadian population grew at about half that rate (19%) during this period.

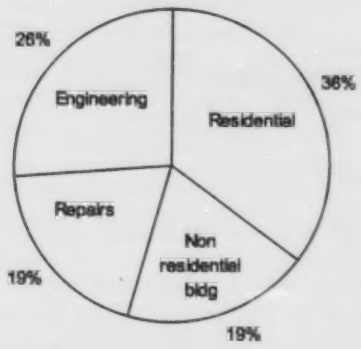
The construction industry includes a lot more than just houses and other buildings
Figure 1

You might be wondering why population growth has anything to do with construction. Actually, it has quite a significant effect on the industry. That's because when people move into an area, they need a place to live. They might need hospital care if they get sick. Those who have kids will use daycares, schools or colleges. People shop in malls and at supermarkets, they drive on highways and over bridges, and they work in office buildings and factories.

As the population expands, the need for these facilities increases. If there aren't enough schools, hospitals, or other facilities to meet the needs of the population, they have to be built. Old buildings are torn down and new ones are put up, offices might be converted into apartments, and new bridges and better highways are built to deal with increased traffic flows. Sometimes it's not population growth so much as the passage of time that makes it necessary to repair or upgrade existing buildings and infrastructure.

What's included in this industry?

More than half of the GDP[3] in the construction industry comes from putting up houses and other buildings, but there's a lot more to the industry than that. About a quarter of its GDP is generated by engineering construction. This includes building roads, highways and airstrips; gas and oil facilities; dams and irrigation projects; railways, telegraph and telephone lines; and other types of engineering projects. Repair construction—on buildings as well as roads, highways and other projects—makes up about a fifth of the value added to the economy by this industry.



Real GDP in 1999: $5.8 billion

Source: Statistics Canada

Figure 1

What's happened since 1984?

Population growth isn't the only factor that influences construction activity. For example, the sector is quite sensitive to changes in the state of the economy. When the economy is booming, the industry usually booms too, but when times are tough, new construction projects tend to be put off. Builders often borrow money to finance big projects (and in the case of houses, homeowners often have to take out a mortgage to pay for their home), so changes in consumer confidence and the cost of borrowing also have a big effect on this sector. So do increases in the price of materials such as lumber that are used in construction.

Figure 2 shows how output and employment in the construction sector have varied relative to the rest of the economy since 1984. During the late 1980s and early 1990s, the industry was growing faster than the rest of the economy (which is why its share of GDP and employment rose so much). However, more recently the industry has stalled. It employed one in

[3] We've used GDP data here, since the employment figures aren't available at the same level of detail.

every 15 workers in 1999, down from a peak of one in 12 in 1994.

One in fifteen workers in BC was employed in construction in 1999
Figure 2

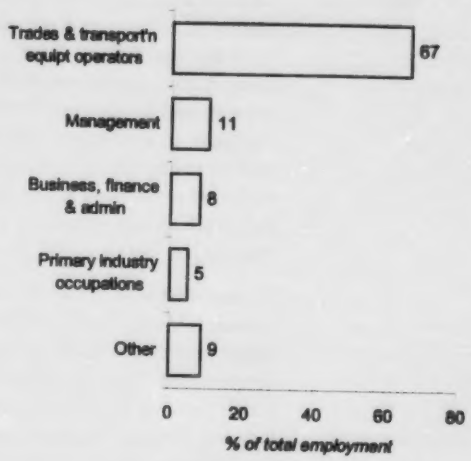
Source: Statistics Canada

Figure 2

What are the most common occupations?

Two out of every three workers in this industry are tradespeople or operators of transportation equipment
Figure 3

Like many other industries, the construction industry employs people in a wide range of occupations involving different types of skills. Two-thirds of the people who work in this industry are tradespeople, contractors, and others who have special skills related to construction. They may also be labourers, or equipment operators. Other common occupations in the construction industry include management (11%), business, finance and administration (8%), and workers in non-technical occupations related to primary industries (5%). Nearly 5% of the people employed in construction are scientists and engineers.



Source: COPS estimate (1998)

Figure 3

How many people work in construction, and how much do they earn?

In 1999, there were 124,700 people working in the province's construction industry. These workers earned an average of $697 for a 37-hour week, 12% more than the typical weekly wage in British Columbia. Within the industry, wages varied from a low of $643 weekly for those employed in residential building and development to a high of $943 for people working on industrial and heavy engineering projects such as highways, dams, waterworks and other major projects.

What are the characteristics of the work force?

The construction industry continues to be male-dominated, with men outnumbering women nine to one in this industry. Most of the jobs are full-time. Only 13% of the workers have part-time jobs.

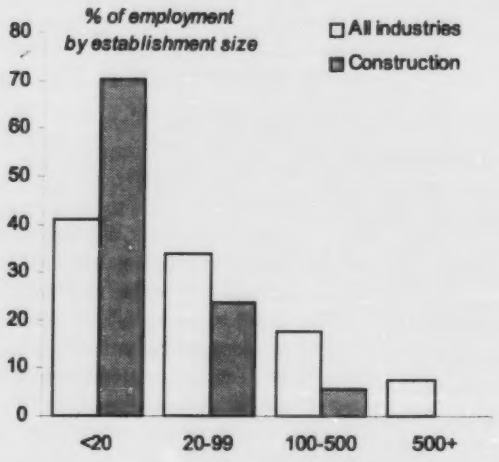
Construction workers have a higher-than-average chance of finding themselves unemployed at some point. Between 1990 and 1998, the unemployment rate in this industry averaged 14%, which was 50% higher than the provincial rate of 9% during this period.

Self-employment is much more common in construction than in most other industries. Four out of every ten workers in the industry are self-employed.

Construction firms tend to be somewhat smaller than firms in other industries. In 1997, the latest year for which we have detailed industry data, seven out of ten employees in the industry had fewer than 20 co-workers. This compares to four in ten workers province-wide who were employed by small businesses. Most of the other workers in the construction industry had jobs in mid-sized firms, with more than 20 but less than 100 employees.

It should be noted that these figures don't include self-employed workers. Self-employment is a significant factor in the construction industry. About 40% of self-employed construction workers have paid helpers. It's likely that most of them operate small businesses with fewer than 20 workers but it isn't possible to verify whether that's true.

Construction companies are usually relatively small. Most employees have fewer than 20 co-workers
Figure 4



Source: Labour Force Survey (1997)

Figure 4

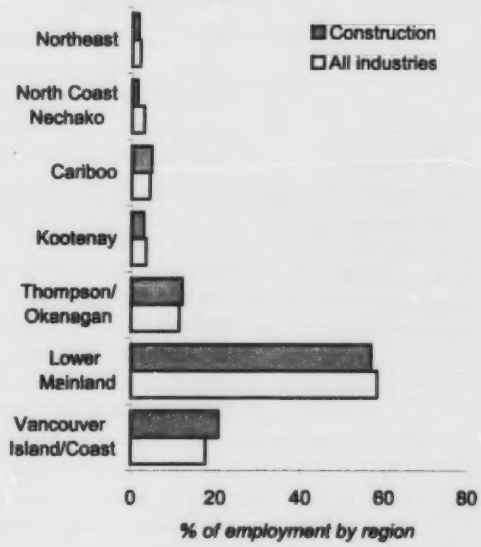
Where are the jobs located?

Most of the construction jobs are in the Lower Mainland and Vancouver Island/Coast regions
Figure 5

Construction activity occurs in all parts of the province, but residential, commercial and institutional buildings are most likely to be built in the more densely populated areas of the province. This probably explains why the Lower Mainland has a slightly higher share of employment in this industry than in the economy as a whole. Six out of ten workers in this industry are located in the Mainland/Southwest Region, with the Vancouver Island/Coast area having about a fifth of the work force.

Many heavy or engineering construction projects occur in more sparsely populated areas. Factories, gas distribution facilities, power generating stations, and dams, for example, are built near a source of water, or near gas fields, or wherever the raw materials used in production are located.

If you are planning a career in the construction industry, you need to decide whether or not you want to be fixed in one location, or whether you are willing to move around. Similar occupations can involve different choices. Take plumbers and pipefitters, for example. Both jobs require somewhat similar skills, but a plumber can probably count on being able to live and work in the same place. That's not necessarily true for a pipefitter who might have to live in a construction camp for part of the year. And, while those working in southwestern BC can expect to be able to work all year round, in other parts of the province where the weather is colder, construction projects may be halted during the winter.



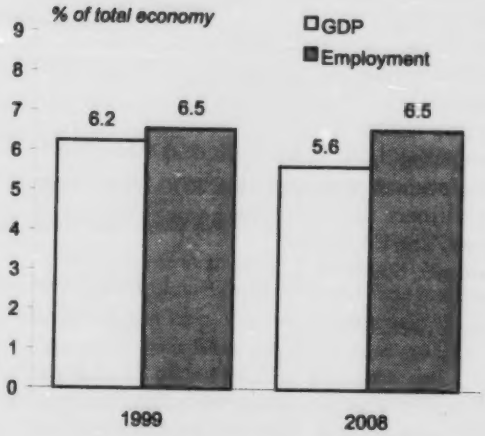
Source: Labour Force Survey (1997)

Figure 5

What's the outlook to 2008?

Employment in construction will likely hold its own during the next decade, but GDP growth is expected to lag behind the rest of the economy
Figure 6

GDP in the construction industry isn't expected to grow as much as in the economy as a whole, but it is anticipated that employment will hold its own. By 2008, it's forecast that the industry will generate just 5.6% of the province's GDP, down from 6.2% in 1999. At the same time, its share of employment is likely to remain constant at 6.5% The fact that employment is expected to grow more than GDP suggests that productivity gains in the construction industry are unlikely to be as strong as in the rest of the economy.



Source: Statistics Canada/COPS forecast

Figure 6

Logging and forest products

Forests cover about two-thirds (59 million hectares) of the province's land mass. Almost all of the wood in BC is softwood, used to produce lumber, plywood, shakes, shingles, newsprint, and pulp and paper products. In fact, about half of the softwood produced in Canada comes from BC and forest products are the province's most important export commodity, accounting for more than half ($15 billion, or 52%) of the province's total exports in 1999.

The industry's role in the economy is declining. It now accounts for only 6% of total GDP and 5% of employment
Figure 7

While it remains the dominant industry in many communities, the logging and forest products industry has been undergoing tremendous changes. Thirty years ago, millwork was mainly done in small mills located near the forest resource. Many of these mills have now closed and timber is being shipped for processing by more efficient, larger mills in central locations. Thirty years ago, our major trading partners were in the United States and Europe. The US is still our biggest international customer, but countries like Japan, Korea, and other Asian nations now account for a larger share of BC's exports than Europe does.

Due to its reliance on world markets, the logging and forest products industry is particularly susceptible to economic upswings and downturns in the rest of the world. The industry is also facing a number of challenges such as coping with concerns about environmental issues and dealing with competition from producers of wood and paper in Europe and Asia. New technology and changes in the demand for forest products have also had a major effect on BC's forest sector.

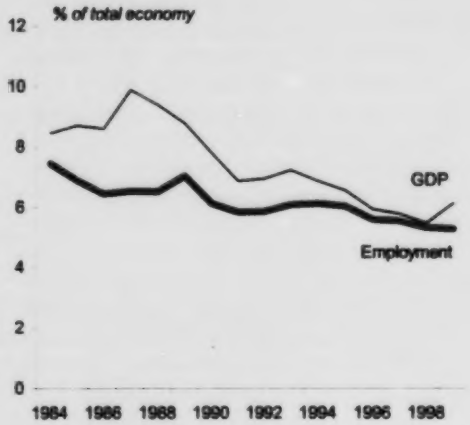
What's included in this industry?

Logging and reforestation services, forest patrols, firefighting, and wood and paper manufacturing are all included in the logging and forest products (forest) industry.

What's happened since 1984?

So what effect have all these changes had on the economy? Figure 7 shows how the relative importance of the forest industry in the provincial economy has changed since 1984.

The industry currently employs about 5% of BC's workers, down from 7% at the beginning of the 1980s. Its contribution to total GDP has fallen even more, dropping from nearly 9% to 6% during the same period.



Source: Statistics Canada

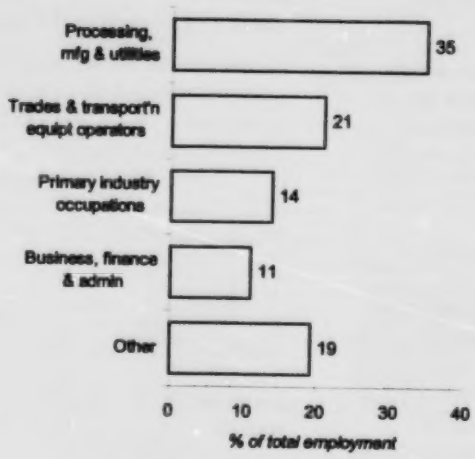
Figure 7

Job growth in this industry has been minimal since 1984. The total number of jobs in the logging and forest products sector increased by only 9% between 1984 and 1999. This compares to overall employment growth of 53% in all industries. GDP growth in forestry has also been well below the provincial average. Over the fifteen-year period, the industry's GDP increased 14%, compared to cumulative growth of 58% in all industries.

What are the most common occupations?

A third of the people who work in this industry have jobs in occupations unique to manufacturing and processing. One in five is a tradesperson, logging truck driver, or operator of other transportation equipment. One in seven works as a logger, faller, logging machinery operator or in other similar occupations. Business, finance and administrative workers make up 11% of the work force, 8% are in natural or applied science occupations, and 6% of the jobs are in management.

Nearly half of the workers in this industry are in occupations unique to manufacturing or primary industries
Figure 8



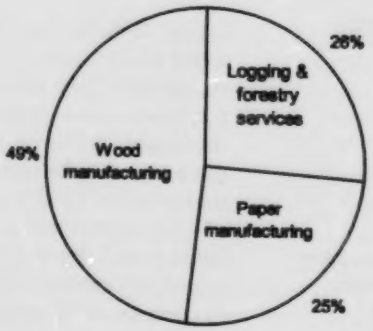
Source: COPS estimate (1998)

Figure 8

How many people work in the logging and forest products industry, and how much do they earn?

In 1999, there were 100,900 forest sector workers employed in BC. Wood manufacturing is the biggest employer, with nearly half of the industry's work force employed at sawmills and other wood manufacturing establishments. Logging, reforestation, and related activities employ 26% of the workers, and a similar number of people have jobs at pulp mills or work for other types of paper manufacturers.

Wood manufacturing employs half of the people working in this industry
Figure 9



Total employment in 1999: 100,900

Source: Labour Force Survey/COPS

Figure 9

The average workweek in the industry ranged from 40 hours a week in wood manufacturing to 41 hours in logging. This was significantly longer than the 31-hour week worked by the average hourly-paid worker in BC in 1999.

The longer hours of work and relatively high rates of pay in the industry translated into average weekly earnings of $899 in 1999. This was 43% higher than the all-industry average for that year. Within the industry, earnings were highest in paper and allied products manufacturing, at $1,073 per week. They averaged $903 in the logging industry, and $829 in wood manufacturing.

What are the characteristics of the work force?

Most of the jobs in this industry involve full-time employment. Ninety percent of the people working in the logging and forest products industry spend at least 30 hours on the job each week. In logging, the percentage is even higher, at 95%. Men make up nearly nine-tenths of the work force.

During the 1990s, unemployment rates in the logging component of the industry stayed in the double-digits, averaging nearly 17% from 1990 to 1998, almost double the 9% jobless rate seen in the economy as a whole. We don't have comparable annual statistics for workers in wood and paper manufacturing, but the average unemployment rate in manufacturing as a whole was 7%. Wood and paper are the two biggest industries within manufacturing so it's likely that the unemployment rate in forest-related manufacturing was similar to that figure. In 1998, the unemployment rate in wood and paper manufacturing was about 7%, while the jobless rate in logging and forest services was 20%.

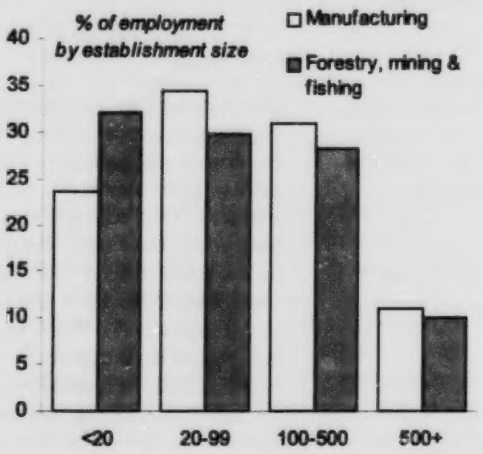
One in every 12 workers in the logging and forest products industry is self-employed. This type of working arrangement is most common in the logging and forest services component of the industry, where about a fifth of the workers are self-employed, but is less frequently seen in wood and paper manufacturing. One reason for the difference is that the set-up costs for a logging operation are usually a lot lower than they would be in wood or paper manufacturing, so it's easier for someone to start up their own logging business. Contract logging (where bigger forest companies hire contractors to do

some of their logging) is a fairly common practice in British Columbia.

The characteristics of establishments within this industry group are quite different. In logging, most establishments are relatively small. Paper production, with its high capital costs, tends to involve bigger establishments with large numbers of workers.

We don't have data on employment by establishment size for the logging and forest products sector. However, the industry is the biggest employer in both of the industry groups shown in Figure 10. As the figure shows, nearly a third of the people who work in primary industries are employed at establishments where there are fewer than 20 people. It should be noted that these figures don't include self-employed workers, who account for a significant share of the work force in the logging industry.

Logging establishments are usually relatively small. In manufacturing, it's more common to have a larger number of workers
Figure 10



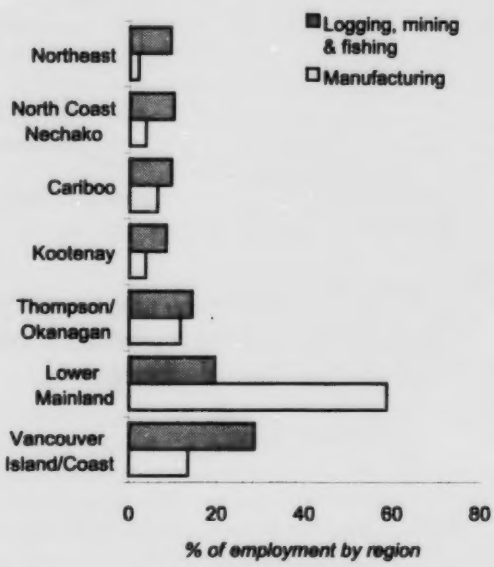
Source: Labour Force Survey (1997)
Excludes self-employed

Figure 10

Where are the jobs located?

Although logging activities occur in most parts of the province, much of the forest-related manufacturing in BC takes place in the Vancouver Island and Lower Mainland areas. About 40% of the work force in the paper industry is located on Vancouver Island, mainly in the central and northern areas of the island, with another 25% of workers in this industry located in the Mainland/Southwest region of the province. The Cariboo has the third-highest number of workers in the paper industry.

Nearly 30% of the workers in logging and other primary industries such as fishing and mining have jobs in the Vancouver Island/Coast region. Another 20% are located in the Lower Mainland. Manufacturing is one of the biggest employers in the Cariboo and North Coast/Nechako regions of the province.



Source: Labour Force Survey (1997)

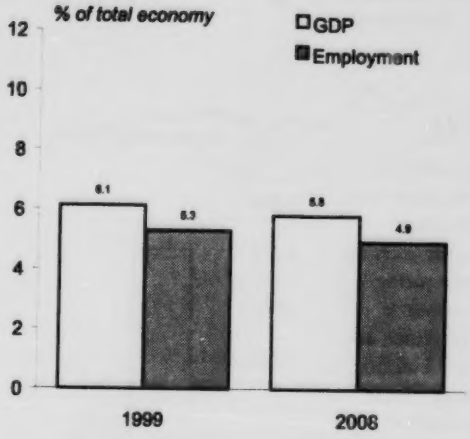
Figure 11

Primary industries such as logging are major employers on Vancouver Island, and in the Northern and Interior regions of the province
Figure 11

What's the outlook to 2008?

Figure 12 shows how employment and value added in the forest sector are expected to change during the next few years. As you can see, forecasters anticipate that employment in the logging and forest products industry will not increase at the same rate as in the rest of the economy. By 2008, the forest sector's share of total employment is expected to fall to 4.9%, down from 5.3% in 1999. During the same period, the industry's share of GDP is forecast to continue to fall, dropping from 6.1% to 5.8%.

The industry's share of GDP and employment is expected to continue to decline
Figure 12



Source: Statistics Canada/COPS forecast

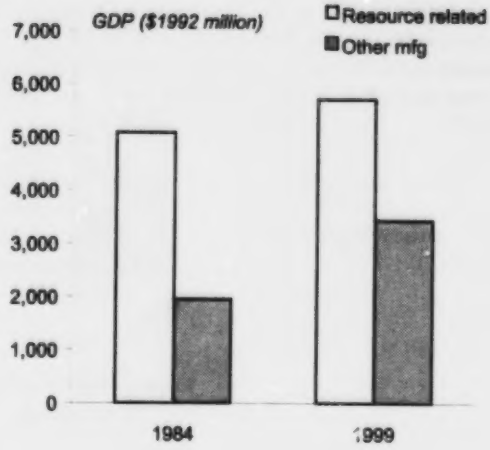
Figure 12

Non-resource-based manufacturing

What's included in this industry?

When you think of manufacturing in British Columbia, you probably think about firms that make wood, paper, metal, food and other products that are based on natural resources or agriculture. But a lot of BC's manufacturing activity isn't directly related to the resource sector at all. Manufacturers in the province are engaged in activities as diverse as shipbuilding, printing and publishing, and furniture manufacturing. They make trucks, trailers, vehicle parts, machinery and clothing. High-technology industries such as those manufacturing computers and other electronics, pharmaceuticals, and similar goods in which a considerable amount of research and development has been invested are also part of this industry.

Non-resource-based manufacturing activities are catching up to the traditional resource-based manufacturers
Figure 13



Source: Statistics Canada

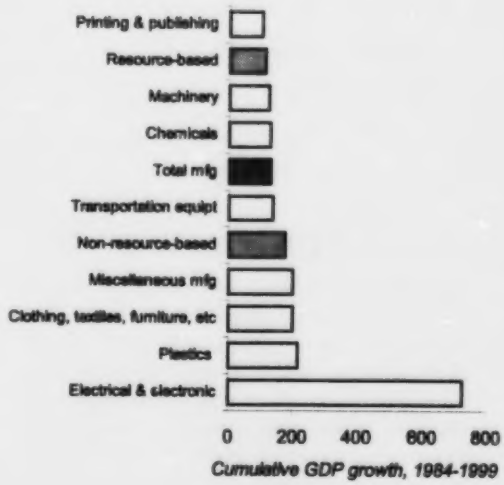
Figure 13

What's happened since 1984?

During the last decade and a half, the composition of BC's manufacturing industry has been changing. It remains dominated by resource-based production, but the focus is gradually shifting to a greater emphasis on other products such as electronics, plastics, vehicles, and clothing. This has partly been fostered by free trade agreements, which have opened up new markets to Canadian producers.

Most of the industries within this group have grown at above-average rates. Electronics has made particularly big gains
Figure 14

Resource-based manufacturing still accounts for the lion's share of total manufacturing in the province, but it's losing ground as these newer types of activities become more prominent. Some—like electronics manufacturing—have experienced phenomenal growth during the last two decades. The GDP of the electrical and electronic products industry has increased by a factor of six since 1984. The fledgling plastics industry has also done very well, doubling its output in a decade and a half. During the same period, the GDP originating in resource-based manufacturing rose only moderately.



Source: Statistics Canada

Figure 14

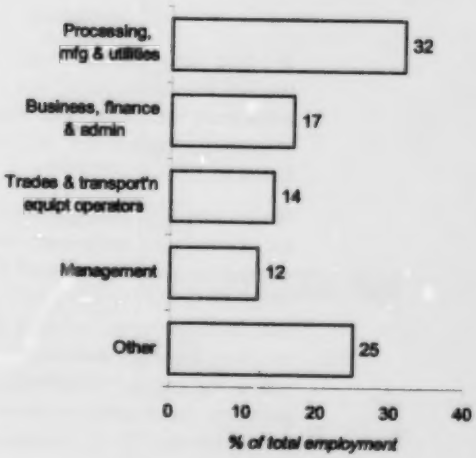
Employment in the industry has increased more rapidly than its GDP
Figure 15

Source: Statistics Canada/COPS

Figure 15

Both GDP and employment in non-resource-based manufacturing have grown faster than the economy as a whole during the period since 1984. Its share of total employment has risen by a full percentage point, and it now employs one in every 25 workers in the province. Despite a downturn in the early 1990s, the percentage of BC's GDP that's attributable to non-resource-based manufacturing has also grown. The industry currently accounts for just under 4% of total GDP.

Most of the jobs are in processing occupations, but four in ten workers have white-collar occupations
Figure 16



Source: COPS estimate (1998)

Figure 16

What are the most common occupations?

The variety of products produced by this industry means that its workers have a broad range of skills and occupations. Occupations specific to manufacturing account for the largest share of total employment (32%), while clerical, finance and other administrative workers (17%) make up about a sixth of the work force. Fourteen percent are employed as trades, transportation and equipment operators, while 12% are in management positions. Sales and service workers (8%), people with occupations in natural and applied sciences (8%) and those in the arts, culture and recreation (6%) account for most of the remaining 25% of the work force in this industry.

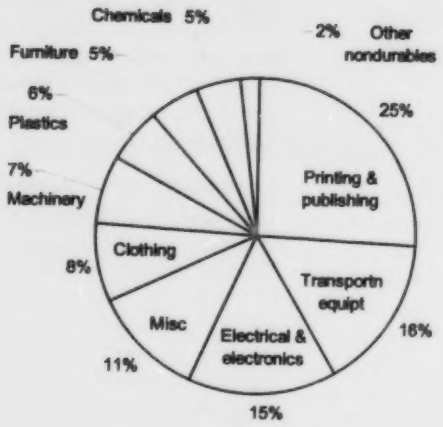
At first glance, the number of people in this industry group who work in science- or arts-related occupations might seem rather high, but the numbers make sense when you look at the sorts of goods that are being produced. For example, half of the people in science-related occupations work in the electrical and electronic products industry; and many of the others are employed in industries producing machinery, transportation equipment and chemicals.

Similarly, one in two workers with arts, culture and recreation-related occupations is employed in the printing and publishing industry. Miscellaneous manufacturing, which produces, among other things, jewelry and silverware as well as signs and displays, is another big employer of people with these occupations. A fair number of lab technicians and other health-care-related workers are also employed in the industry, which manufactures scientific and professional equipment.

How many people work in non-resource-based manufacturing, and how much do they earn?

Non-resource-based manufacturing industries employed 83,100 workers in the province in 1999. Printing and publishing firms were the biggest employers in the industry, with a 21,500-strong work force. Manufacturers of transportation equipment (13,200), electrical and electronic products (12,400), and miscellaneous durable goods (9,500) were other major employers. Although it's still relatively small, BC's plastics (6%) industry is one of the fastest growing in this sector.

Printing and publishing, transportation equipment and electronics manufacturing are the biggest employers
Figure 17



Total employment in 1999: 83,100

Source: Labour Force Survey/COPS

Figure 17

We don't have details on the number of hours worked in each industry, but a typical workweek for hourly paid workers in the manufacturing industry as a whole was 39 hours in 1999.

Wages averaged $640 per week, but there is a lot of variability in the earnings of people who work in non-resource-based manufacturing. Workers in the leather ($247), clothing ($320) and furniture manufacturing ($393) industries received relatively low wages—significantly below the average for all industries in the province. In contrast, workers in the electrical and electronic ($916), machinery and equipment ($827) and transportation equipment ($791) industries received a weekly pay packet that was much higher than in most other industries. These differences are most likely due to pay scales rather than the number of hours worked each week.

What are the characteristics of the work force?

Full-time employment is somewhat less common in these manufacturing industries than in the resource-based activities, but it is still by far the most common work arrangement. Nearly nine-tenths of the people who work in this industry group spend at least 30 hours a week on the job.

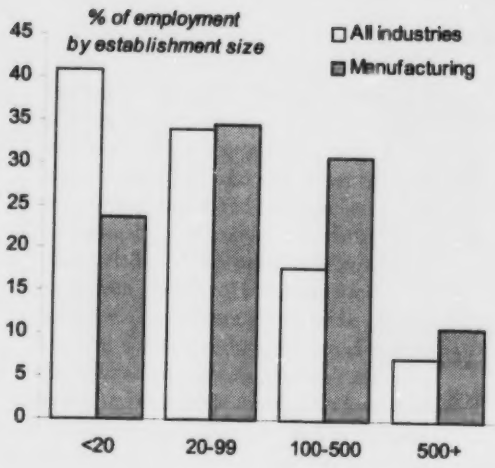
Men outnumber women two to one in these industries, which is a relatively low male-female ratio for the goods sector. Overall, there are four times as many men as women who work in the goods-producing industries.

Most of the workers in clothing and textile industries are women. They make up more than 40% of the work force in printing and publishing, and they're also relatively well represented in electronics, chemicals and miscellaneous manufacturing, where one in three workers is female. However, they're outnumbered about seven to one in industries producing transportation equipment and machinery.

We don't have unemployment data for all years, but in 1998, the unemployment rate in non-resource-based manufacturing was just under 7%, which was slightly lower than the average for all manufacturing. The unemployment rate for the manufacturing industry as a whole averaged about 7% between 1990 and 1998–nearly 25% lower than the provincial rate of 9%.

High start-up costs for many types of manufacturing mean that self-employment isn't that common in this industry group. However, it's much more prevalent than in resource-based manufacturing. Approximately one in every eight workers in non-resource-based manufacturing is self-employed. This work arrangement is most common in industries such as textiles, leather, furniture and miscellaneous manufactured items, where the nature of the product that's produced makes it possible to work in a small facility. It's infrequently seen in industries producing big-ticket items such as electronics or transportation equipment, but even in these industries there are some people who work for themselves.

Manufacturing establishments are typically larger than those in other industries
Figure 18



Source: Labour Force Survey (1997)
Excludes self-employed

Figure 18

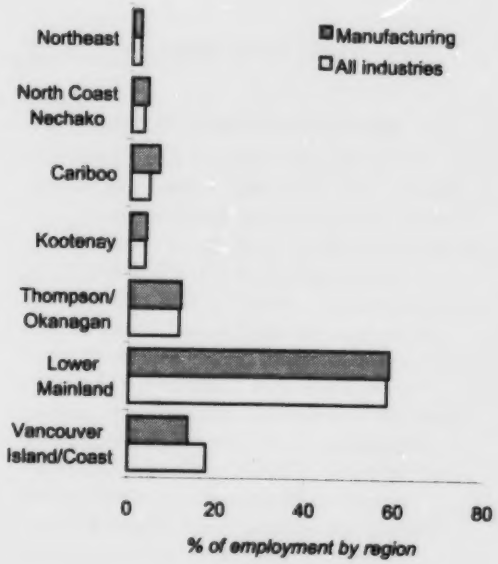
Where are the jobs located?

We don't have data on employment by region for non-resource-based manufacturing separate from other manufacturing activities. However, most of the jobs in these industries are located in and around the Lower Mainland area. Vancouver Island/Coast and Thompson/Okanagan are other areas where non-resource-based manufacturing firms are typically found.

What's the outlook to 2008?

As a group, non-resource-based manufacturing industries are expected to be one of the bright spots in the BC economy during the next few years. Their share of GDP is forecast to grow by half a percentage point, increasing from 3.7% to 4.2% during this period. The increase is expected to come largely from productivity gains, as employment growth in the industry is forecast to be about the same as in the rest of the economy. The industry's share of total employment is expected to remain stable at 4.4%.

Sixty percent of the manufacturing jobs in BC are located in the Lower Mainland region of the province
Figure 19

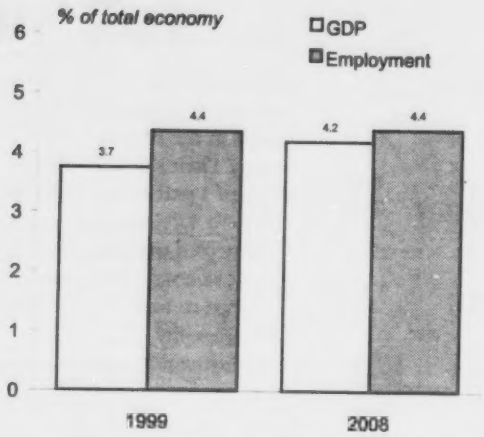


Source: Labour Force Survey (1997)

Figure 19

One factor that will likely contribute to growth in the non-resource-based manufacturing sector is the strength of some of its component industries. The machinery and equipment, miscellaneous manufacturing, and electronics industry are anticipated to be the top performers, with GDP in these industries forecast to increase between 60 and 75 percent over the next few years. GDP in the other industries within this group is forecast to grow more modestly, in the 15% to 30% range. The average increase for the economy as a whole is expected to be 25% during the period from 1999 to 2008.

The industry's share of total GDP is expected to continue to grow during the next few years
Figure 20



Source: Statistics Canada/COPS forecast

Figure 20

Agriculture, food and beverages

The agri-food (agriculture, food and beverage) industry used to be one of the most important industries in any region's economy. That's because until very recently, most of the food people consumed had to be grown domestically. Cheeses, wines, citrus fruits, and other relatively non-perishable items might have been imported, but most foods came from local producers. There were good reasons for that: without refrigeration and rapid transportation systems, it wasn't easy to transport perishable foods over long distances. Not so long ago, fresh fruits like mangos, pineapples, and papayas were somewhat exotic, available at supermarkets for short periods only, if at all. Now, they're found year-round in many grocery stores.

At the turn of the last century, about 40% of the workers in Canada were employed on farms. The figure's dropped to 4% nationally, and just 2% in BC.

Although the industry as a whole is no longer one of the big players in the province's economy, food processing is BC's third-biggest manufacturing activity.

What's included in the agri-food industry?

BC's agri-food industry includes a variety of different types of farming and food processing operations. The production of ginseng, flowers and nursery products is one of the fastest-growing segments in the industry. Greenhouses, which produce peppers, tomatoes, cucumbers and mushrooms, account for a significant share of total Canadian production. Some have even expanded their operations to places outside the country. There are berry producers in the Fraser Valley, tree fruit growers in the Okanagan, grain farmers in the Peace River area, and large cattle ranching operations in the central interior regions of the province. Dairy farms, poultry producers, and other livestock operations also play an important role in the industry.

Food and beverage processors preserve the fruits, vegetables, grapes and other products grown on BC farms by freezing, canning, drying or distilling them. They also produce soft drinks, bakery products and other goods using ingredients that may or may not have been grown in the province.

Most (60%) of the people working in this industry are employed on farms, or in livestock and crop services such as horticultural, veterinary and breeding services. Thirty-five percent are employed in food processing, and another 5% work for companies that produce soft drinks, beer, wine and other alcoholic beverages.

What's happened since 1984?

The industry is facing new challenges

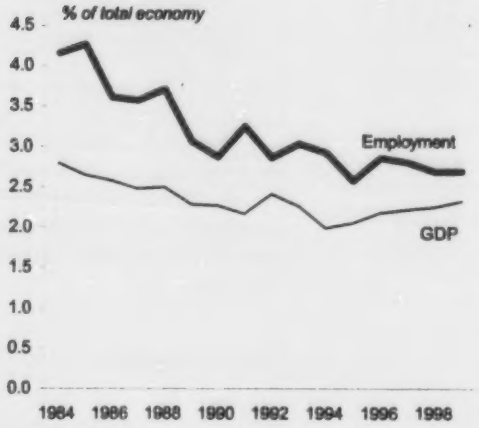
High land prices in urban areas, lower production costs in other parts of the world, cold storage facilities, reduced trade barriers, and the ability to transport goods quickly have all contributed to the declining role of agriculture in BC's economy. Farmers in places like the Fraser Valley, the Okanagan or the Peace River area can no longer count on having a niche in the market. They now have to compete with farmers from all over the world. You can see this in your local supermarket. Fruits and vegetables are often imported from places like California even when they are available locally. Why? Because the imports cost less, or they're available in larger quantities.

Competition from the outside world isn't the only challenge that this sector is facing. Our eating habits have changed a lot. A growing number of people don't use meat at all, and many are consuming less of it than they did in the past. They've developed a taste for fruits and vegetables that can't be grown in the province and for ethnic foods that may not be available from local producers. And they're more concerned about the use of pesticides and techniques like irradiation.

Farmers are adapting to these changes. They're finding new ways to get their products to consumers, and focusing more on producing products that are of higher quality or cheaper than those available from other suppliers. They're growing new crops like ginseng. A

wine industry has developed in the province, using grapes grown mainly in the Okanagan. Organic farming and greenhouse operations have become more prevalent.

The agri-food industry hasn't kept pace with the rest of the economy, but there are signs that the situation may be improving
Figure 21



Source: Statistics Canada

Figure 21

The declining role of the agri-food industry in BC's economy is reflected in the fact that the industry's share of both GDP and employment has fallen since 1984. The percentage of BC's work force that's employed in agri-food industries has dropped from just over 4% to just under 3%. Its contribution to total GDP has fallen more moderately (half a percentage point), to 2%.

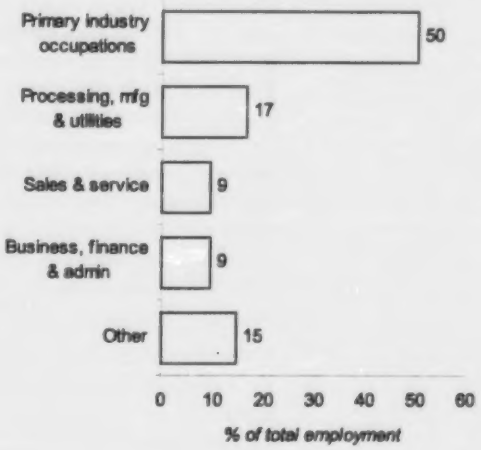
However, as Figure 21 illustrates, there are signs that the long-run decline may be coming to an end. During the latter part of the 1990s, the industry's share of employment remained stable, while its contribution to total GDP has begun to increase. Although there are many factors that could have contributed to this change, the upturn suggests that some of the diversification and restructuring that's been happening in the industry may be starting to pay off. The agri-food industry is now beginning to show some productivity improvements.

What are the most common occupations?

Half of the workers in this industry are in occupations that are specific to farming. One in five is a farmer or farm manager, one in six is a farm worker, and others are nursery and greenhouse workers or harvesting labourers.

Processing and manufacturing-related occupations employ 17% of the workers while sales and services and business, finance and administration each account for about 9% of the people working in this industry. Most of the remaining 15% of the work force in this industry is employed in trades (6%) and managerial occupations (4%).

Half of the workers in agri-food are farmers, farm, nursery and greenhouse workers, or in similar occupations
Figure 22



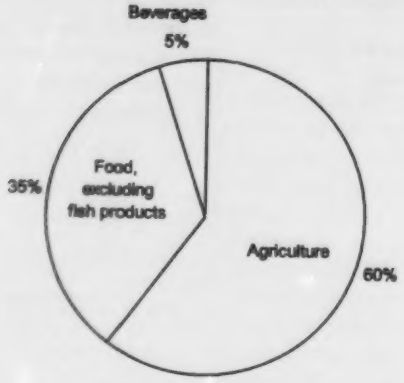
Source: COPS estimate (1998)

Figure 22

How many people work in agriculture, food and beverages, and how much do they earn?

In 1999, there were 51,500 people who worked in BC's agriculture, food processing and beverage industry. Most (31,000) of them were farm workers. Another 17,900 had jobs in food processing plants while 2,500 were employed by beverage manufacturers.

Six out of every ten workers in the industry have jobs at farms or in livestock or crop services
Figure 23



Total employment in 1999: 51,500
Source: Labour Force Survey/COPS

Figure 23

Workers in food and beverage manufacturing earned an average of $579 for a 36-hour workweek in 1999. Wages in the beverage industry ($767) were higher than in food manufacturing ($544). We don't have similar information on wages and hours for the agriculture component of this industry group. However census data for 1995 indicate that workers in agriculture earned about 50% less than those in the food processing industry in that year.

Most farm and agriculture-service establishments have fewer than 20 employees
Figure 24

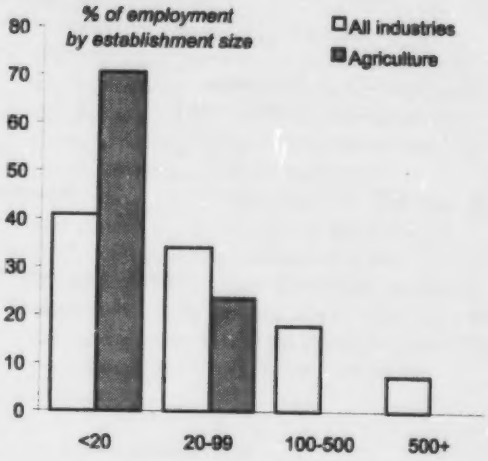
What are the characteristics of the work force?

Three out of every four jobs in agriculture and related manufacturing involve full-time employment. This is somewhat lower than the average for all goods-producing industries. Farm workers are more likely to be employed part-time than those who have jobs in food or beverage processing plants.

Four out of every ten workers in the industry are female, making agriculture the only industry in the goods sector where the male-female composition of the work force is close to the overall average. For the province as a whole, women make up about 45% of the work force.

Unemployment rates for farm workers averaged about 13% during the 1990s, nearly double the 7% average for manufacturing as a whole and significantly higher than the 9% average for all industries in BC. We don't have annual data on unemployment rates for the agri-food industry.

Self-employment is very common for farmers, but less frequently seen on the manufacturing side. More than half of the people working on farms or in agriculture-related services are self-employed. This compares to one in twenty workers in food and beverage manufacturing. As Figure 24 illustrates, 70% of the people who are employed on farms in BC work at a job site where they have fewer than 20 co-workers.



Source: Labour Force Survey (1997)
Excludes self-employed

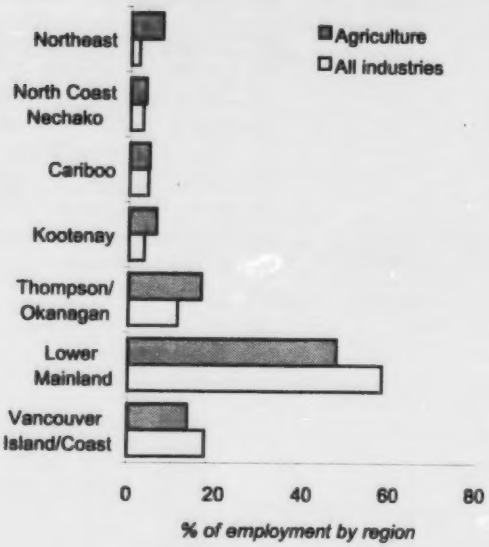
Figure 24

It should be noted that these figures don't include self-employed workers. In agriculture, about a third of all self-employed workers have paid help, while the rest work on their own. Thus, it's very likely that virtually all of the self-employed people in this industry work in small operations with fewer than 20 employees.

Where are the jobs located?

A wide variety of agricultural products are grown in British Columbia. The Fraser Valley is a source of berries and vegetables; tree fruits and grapes are grown in the Okanagan; and grain is grown in the Peace River region. Large cattle ranches are located in the Cariboo and elsewhere in the Interior, while dairy farms operate near most major population centres. Food processing plants are usually located close to where the crops or livestock are raised.

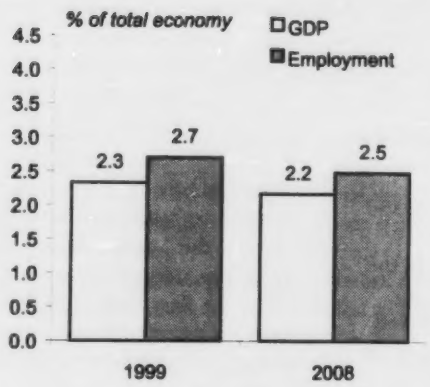
About half of the people employed in BC's farming and agricultural services industry are located in the Lower Mainland
Figure 25



Source: Labour Force Survey (1997)

Figure 25

While GDP in the agri-food industry will remain fairly stable, employment isn't forecast to grow as much as in the rest of the economy during the next few years
Figure 26



Source: Statistics Canada/COPS

Figure 26

What's the outlook to 2008?

It's expected that the agri-food industry will grow at about the same rate as the rest of the economy during the next few years. By 2008, the industry's share of total GDP is forecast to be only slightly lower than in 1999, dropping from 2.3% to 2.2%. Continued productivity improvements, however, will mean that job growth in the industry won't be as strong as in the rest of the economy. Agri-food's share of total employment is forecast to fall from 2.7% to 2.5% between 1999 and 2008.

Mining and mineral products

Barkerville is now a ghost town, visited mainly by tourists with an interest in history. But in 1860 it was a booming centre serving miners who rushed to the province after gold was discovered in the Fraser River and Cariboo regions. The discovery of gold was an important turning point in British Columbia's economic history. Miners hoping to strike it rich came to the province from as far away as San Francisco. Most of them didn't become rich, but they did leave a legacy behind them. Many cities in BC came into existence as a result of the gold rush.

Like other resource-based industries, mining has played an important role in the development of British Columbia's economy, from the early days of the 1840s when coal was the most important mineral product, through the gold-rush years, and to the present.

What's included in the mining and mineral products industry?

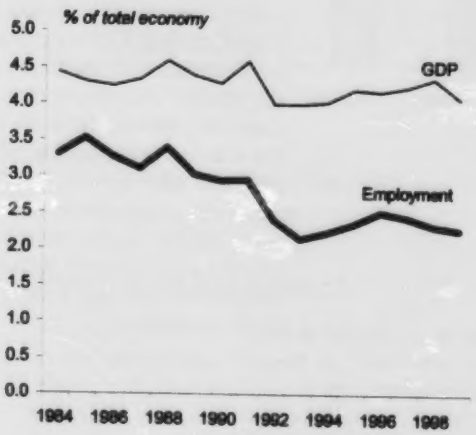
The mining and exploration component of this industry is mainly involved in extracting metals, minerals, coal, oil and gas resources that are found throughout the province. Crude petroleum and natural gas production account for more than a third of BC's total mineral production, while the value of coal produced in the province makes up a quarter of the total. Other important mineral products include copper, gold, zinc and molybdenum. Silver and lead are also mined in significant quantities. Some firms in this industry extract stone, sand and gravel from quarries and sand pits. Others are involved in exploring for minerals and digging oil and gas wells.

Companies in the mineral products industries process ores and smelt them into bars and ingots, or use metals and other mineral products to produce doors, pipes, wire, tools, nuts and bolts and so on. Cement and concrete, gypsum, glass, and various types of lubricants are also produced by industries in the mining sector.

What's happened since 1984?

The mining industry is very sensitive to changes in world markets because products like coal and copper are usually exported, and prices for most mineral products are set internationally. This means that exchange rate fluctuations and economic conditions in countries like Japan affect the value of metals, fuels, and other minerals produced in BC. This can both help and hurt the industry. In the case of coal production, for example, lower prices, and soft demand in Asia, one of our most important markets, has greatly affected this industry. A drop in coal prices was almost certainly a big factor in the recent decision to close down coal mining activities in Northeast BC, as most of the coal from that region was destined for use in Japan. Depressed world prices for metals such as copper or molybdenum have taken their toll. The mining and mineral products industry has also been challenged by foreign competition and environmental concerns. On a more positive note, the industry benefits when prices begin to rise, and soaring oil and gas prices have recently contributed to a boom in that part of the industry.

Mining's share of GDP has more or less held its own even though employment growth has lagged behind the provincial average
Figure 27



Source: Statistics Canada

Figure 27

Since 1984, growth in the oil and gas, exploration and development, and quarrying industries has helped offset a downturn in the metal and coal industries. Similarly, some of the manufacturing activities have expanded substantially since the mid-1980s.

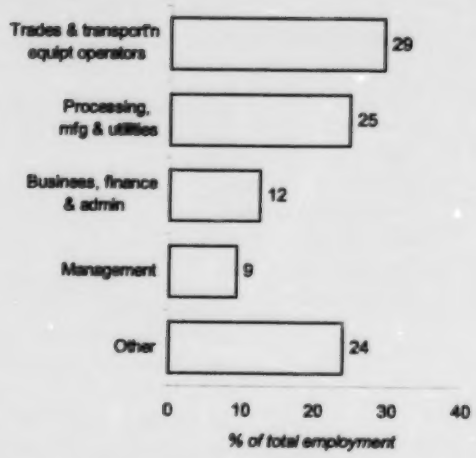
The number of jobs in BC's mining industry has increased only marginally (by about 5%) during the period since 1984. This is well below the average for the economy as a whole. However, productivity gains have meant that the industry has grown almost as much as the rest of the economy during the last fifteen years.

Most of the workers in this industry are tradespeople, equipment operators, or in occupations specific to manufacturing
Figure 28

The mining and mineral products industry's share of total GDP is a lot higher than its share of employment, indicating that labour productivity is well above the provincial average. This is partly a reflection of the higher wages paid to workers in the industry, but may also be due to the type of technology that's used to produce the industry's output, especially in some parts of the industry.

What are the most common occupations?

Nearly a third (29%) of the people who work in the mining and mineral products industry have jobs as trades and transportation equipment operators. Both the resource extraction and the manufacturing components of this industry employ a lot of people in these occupations. One in four workers in the industry is in an occupation unique to processing and manufacturing. Business, finance and administrative occupations account for 12% of the workers and management jobs, 9%. Of the remaining 24% of the work force, most are in the sciences (9%), mining-related occupations (8%) and sales and services (6%). Metal fabricating, exploration and development and metal mining are the industries within this group that employ the largest number of people with training or skills in the natural and applied sciences.



Source: COPS estimate (1998)

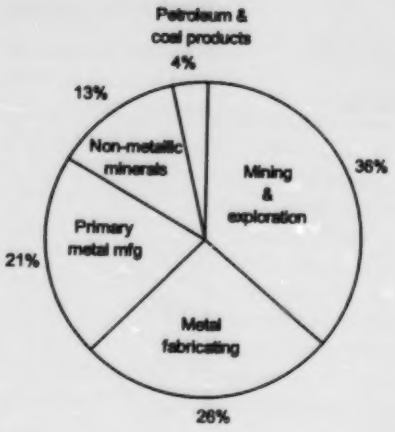
Figure 28

How many people work in the mining industry, and how much do they earn?

In 1999, there were 43,400 people working in the mining and mineral products industry. Just over a third (36%) of them were involved in resource extraction or exploration. Of the roughly 15,700 jobs in this segment of the industry, 4,700 were related to mineral exploration and development.

Metal fabricating (producing structural products, hardware, tools and so on) provides just over a quarter (26%) of the jobs in the mining and mineral products industry, with another 21% of the work force employed in primary metal manufacturing (smelting and refining). Thirteen percent of the work force is employed producing non-metallic mineral products such as cement, concrete, glass and abrasives. Relatively few (about 4%) have jobs in the petroleum and coal products industry.

Just over a third of the workers in this industry are involved in extracting and exploring for minerals; the rest work in manufacturing
Figure 29



Total employment in 1999: 43,400

Source: Labour Force Survey/COPS

Figure 29

Due to the nature of the work that's done, establishment sizes in mining and mineral products tend to be somewhat larger than in other resource-based industries
Figure 30

Comparatively high-risk working conditions, especially for those working underground, mean that wages in this industry must include a risk premium to compensate for the type of work that must be done. Overall, average wages in mining (including the related manufacturing industries) were $759 for a workweek that was about 41 hours long in 1999. Mine workers received an average of $1,166 per week, more than in any other major industry, and nearly double the provincial average of $625. Wages in mining-related manufacturing were much lower, ranging from $516 in the metal fabricating industry to $681 weekly in primary metals manufacturing.

What are the characteristics of the work force?

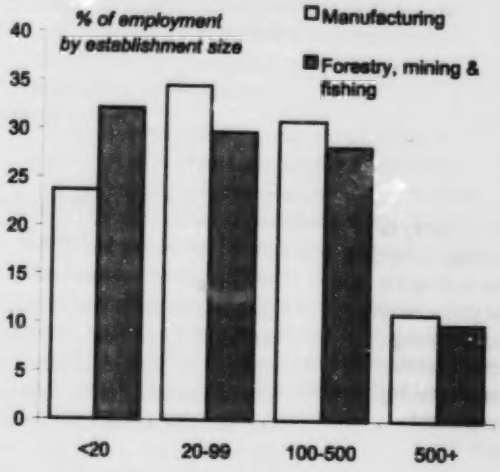
Nearly all (about 90%) of the people working in primary mining and related manufacturing activities have full-time jobs, working for at least 30 hours a week.

Women make up about 15% of the work force in this industry. The male-female ratio is similar in both mineral extraction and exploration and in mineral products manufacturing.

Unemployment rates in mining have historically been somewhat lower than in the other primary industries, although the jobless rate has shot up from time to time. We don't have annual data for mining, but in 1998, the unemployment rate in mining, quarrying and oil wells was about 8%, which was the same as in 1995. The average unemployment rate in manufacturing as a whole was 7% during the 1990s.

Self-employment isn't very common in either mining or mineral processing. Less than 10% of the people working in this industry group are self-employed.

Data on employment by establishment size isn't available for the mining industry separate from fishing and forestry. However, the figure below shows how the average size of establishments in primary industries compared to those in manufacturing.



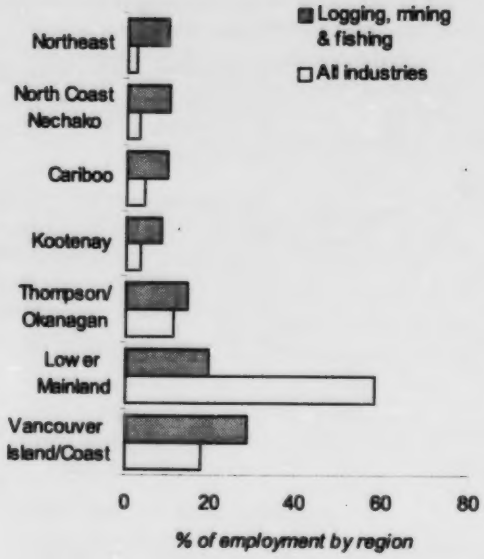
Source: Labour Force Survey (1997)

Figure 30

Where are the jobs located?

Mineral deposits are found in various locations around the province: copper on Vancouver Island, lead, silver and zinc in the southeastern part of the province, and molybdenum in the Interior and near Port Hardy on Vancouver Island. British Columbia's large deposits of coal are mainly found in the Crowsnest and Northeastern regions, while natural gas comes from the Peace River area.

Most of the jobs in the resource extracting industries are located outside the Lower Mainland
Figure 31



Source: Labour Force Survey (1997)

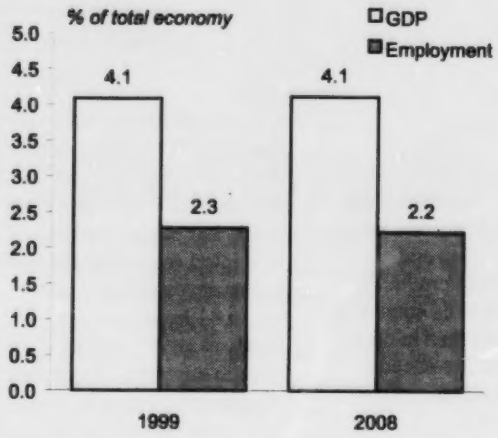
Figure 31

The industry is forecast to hold its own during the next few years, largely due to strong growth in the manufacturing component
Figure 32

Both GDP and employment in this industry are expected to grow at the same rate as for the economy as a whole, so their share isn't forecast to change during the next few years. This is expected to be largely due to growth in the manufacturing component of the industry, especially primary metals and metal fabricating. Mineral extraction and exploration activities aren't forecast to increase as much.

What's the outlook to 2008?

It's worth noting that the forecast data we've used is based on estimates produced prior to the large jump in oil and gas prices that began in late 1999. It's entirely possible that higher prices will promote more exploration and development activity in the province, and could boost the oil and gas sector in other ways as well. If these were factored in, they might well have the effect of increasing the expected growth of the mining industry over the next few years. However, an updated forecast wasn't available at the time this document was produced.



Source: Statistics Canada/COPS forecast

Figure 32

Utilities

Did you know that 25% of the world's fresh water supply is located in Canada? A third of that water, or about 8% of the world's total supply, is in British Columbia. Electric power utilities rely on a bountiful source of fresh water to produce hydroelectric power at dams like the Revelstoke and Mica dams in the Kootenays, or the WAC Bennett Dam in the Peace River region. We heat our homes, cook our food and even play computer games using electricity that's supplied by the utilities industry.

What's included in utilities?

Electric power isn't the only utility that's included in this industry, although it is the biggest one. Electricity supplies a fifth of the energy used by households, businesses, and factories in British Columbia. Distribution systems make it possible for the province to export excess electric power generated in BC to other provinces and to the rest of North America.

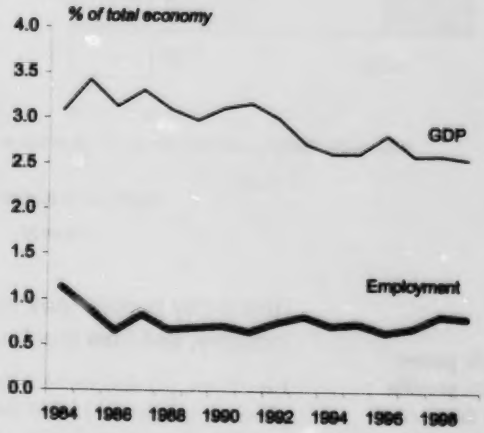
Gas distribution activities are also important. In BC, natural gas from the Peace River Area is transmitted by pipeline to consumers in the Lower Mainland and on Vancouver Island, where customers have had access to natural gas for heating and other purposes since the completion of the Vancouver Island Natural Gas Pipeline a few years ago. Other utilities include water purification and distribution, and sewer and garbage services.

What's happened since 1984?

Utilities employ just 1% of the province's work force, a share that has remained quite stable since the mid-1980s. However, their contribution to total GDP is much higher, at nearly 3%. As Figure 33 illustrates, the utilities industries haven't been growing quite as fast as the rest of the economy, and their share of total GDP has declined slightly during the last fifteen years.

The significant difference between this industry's share of total GDP and its share of employment is a reflection of the way in which utilities are generated. You may recall that the value added to the economy by an industry is the result of using both capital (equipment) and labour inputs to transform purchased materials into a final product. In the case of both electric power and gas distribution, most of the work involved in producing the power or gas isn't done by humans. Electric power utilities use dams (which are a type of capital) and hydroelectric generators to convert water resources into electricity which is then transmitted along a complex network of power lines to their customers. Similarly, natural gas which has been extracted from wells (by the mining industry) is liquefied and transported through a pipeline system to the homes or businesses of consumers.

Companies producing these goods invest a great deal of money building the distribution and generation systems, but once they're built, the equipment does most of the work. They still need people to operate and maintain it, but the human element is much smaller than in most other industries. To a certain extent, the same is true of water and sewer services. That's why you find that labour productivity in utilities is so much higher than the average for the economy as a whole.



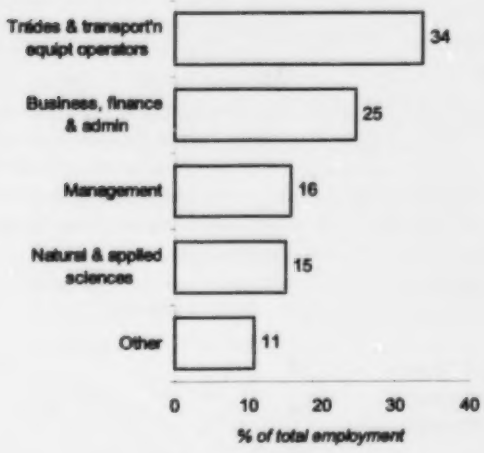
Source: Statistics Canada

The utilities industry's contribution to total GDP has fallen slightly since the mid-1980s, but remains much higher than its share of employment
Figure 33

What are the most common occupations?

As in most of the other goods industries, tradespeople and transportation equipment operators make up the biggest percentage of the work force. One in three people with jobs in this industry is in this occupational group. The large number of customers served by the utilities industry (both households and businesses) is likely the reason for the high concentration of people in business, finance and administrative (25%), and managerial occupations (16%). The industry also employs a higher than average number of people with occupations in the natural and applied sciences (15%), many of whom are engineers and engineering technicians. People in occupations specific to manufacturing, processing and utilities account for more than half (6%) of the remaining 11% of the work force.

Engineers and other workers in natural and applied sciences make up 15% of the work force in this industry
Figure 34



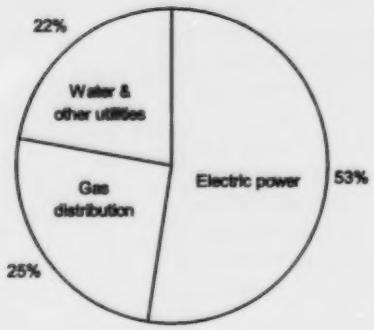
Source: COPS estimate (1998)

Figure 34

How many people work in the utilities industry, and how much do they earn?

Electricity, gas and water utilities in the province employed 15,600 British Columbians in 1999. About half (8,200) of them worked for electric power utilities, while natural gas (3,900) and water and sewer (3,500) utilities had similar numbers of workers.

Electric power utilities provide more than half of the jobs in this industry
Figure 35



Total employment in 1999: 15,600

Source: Labour Force Survey/COPS

Figure 35

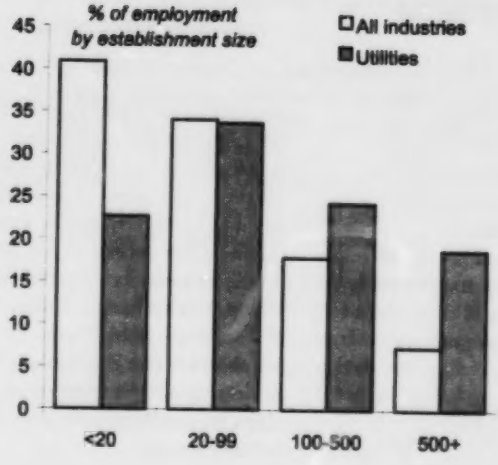
Earnings in the utilities industry were well above the provincial average, due in part to the relatively large number of highly skilled workers employed in the industry. People working for the electric power industry received an average of $1,015 per week, while those employed by other utilities earned a weekly wage of $996. The average workweek in this industry was 37 hours long in 1999.

What are the characteristics of the work force?

More than 90% of the people who work in the utilities industry have full-time jobs. The average for all workers in goods-producing industries is 80%. Seven in ten workers are male.

We don't have annual data on unemployment rates in this industry, but the information we have indicates that people who work in this industry aren't very likely to find themselves unemployed. In the years for which we have data, the industry's jobless rate was less than half the provincial average.

Establishments in utilities tend to be larger than in other industries
Figure 36



Source: Labour Force Survey (1997)

Figure 36

As was discussed earlier in this chapter, there's a huge amount of capital equipment required to generate electricity, provide gas, or purify water and provide it to consumers and businesses. Therefore, self-employment is virtually non-existent in this industry.

People who are employed in utilities are more likely to work in large establishments rather than smaller ones. Only a fifth of the workers work at an establishment where there are fewer than 20 employees.

Where are the jobs located?

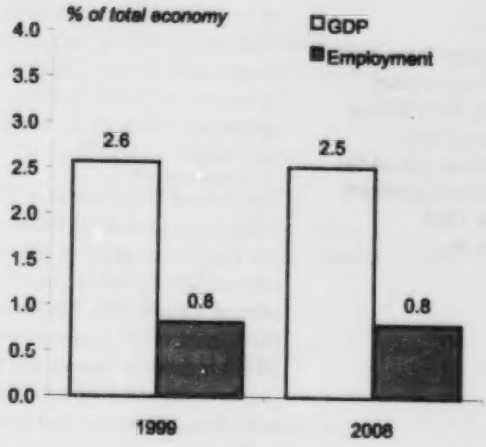
Six in ten workers in this industry are located in the Lower Mainland region, with another 12% living in Vancouver Island/Coast. We don't have data on employment for the other regions of the province.

What's the outlook to 2008?

Although commercial usage of electric power and other utility systems may be affected by changes in the economy, this industry is relatively immune to outside economic influences, compared to many other industries. Even in bad economic times, consumers still need electricity and gas, and they continue to use water, sewer and garbage collection services.

Both GDP and employment in this industry are expected to grow at average rates during the next few years. Utilities are forecast to continue to generate about 2.5% of the province's gross domestic product, and employ just 0.8% of its workers.

GDP and employment in the utilities industry are expected to grow at average rates during the next few years
Figure 37



Source: Statistics Canada/COPS forecast

Figure 37

Fishing and fish processing

As is the case for other resource-based industries, fishing and fish processing doesn't play as a big a role in BC's economy as it once did. There are still many communities in the province where the fishery and related manufacturing activities are important to the local economy. However, the industry currently generates less than half a percent of the province's total GDP, and its share of total employment is equally small.

BC's fishing industry has faced serious challenges in the last few years. If you follow the news, you've probably heard a lot lately about declining fish stocks and the collapse of the salmon fishery. This has forced the closure of the salmon fishery in some coastal areas. While some fishers have been able to compensate for the decline in the salmon stock by harvesting other species, such as shellfish, halibut and herring, the stock of these fish is also subject to fluctuations.

Although there have been some good years, BC's fishing industry hasn't grown as fast as the rest of the economy since 1984
Figure 38

The federal Department of Fisheries, which manages the saltwater fishery off BC's coast, has adopted a policy of reducing the size of the salmon fleet by buying out the licences held by salmon fishers. This has successfully reduced the fishing effort, but it remains to be seen whether these measures will be enough to preserve the stock of fish that's available to both the commercial and recreational fisheries in BC.

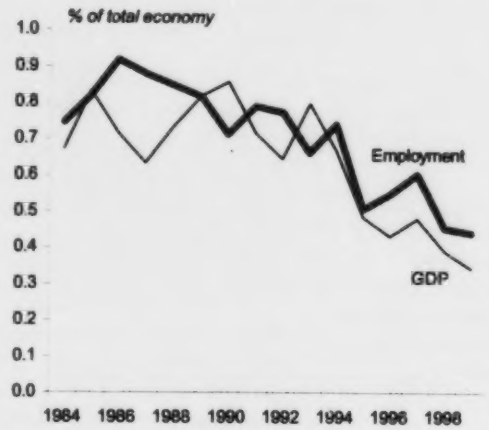
What's included in the industry?

This industry includes commercial fishing for both finfish and shellfish species, aquaculture (fish and shellfish farming) activities, as well as hatcheries and other types of fishing-related services. In addition, hunting and trapping is also included in the industry definition, although these activities are negligible in BC.

What's happened since 1984?

The commercial fishery has gone through some stormy waters

The fishery in BC hasn't fared particularly well since 1984. In the mid-1980s, it accounted for nearly 1% of the economy, in terms of both the number of jobs and its contribution to GDP. By 1999, the industry's share of total GDP and employment had fallen to less than half a percent. As Figure 38 illustrates, the long-term trend has been for below-average growth, but much of the decline in the relative importance of this industry has occurred since the mid-1990s. The spike in employment and GDP in 1997 reflects a large jump in the salmon catch, but this was not big enough to halt the long-run decline in the industry, particularly as the salmon catch began to plummet in the following year.



Source: Statistics Canada

Figure 38

The province's fish processing industry has felt the effect of a dwindling catch, and both GDP and output in this component of the fishing industry have fallen (in absolute terms) since the early 1980s.

However, BC's growing aquaculture industry has provided a much-needed boost to the fishery

The news is not all gloomy for this industry, however, as the 1990s have also seen the development of a growing aquaculture industry, which produces farmed salmon as well as several varieties of shellfish. BC fish and shellfish farming operations supply salmon and other types of farmed fish to markets in California, Japan, and other parts of Asia. About three-quarters of farmed salmon

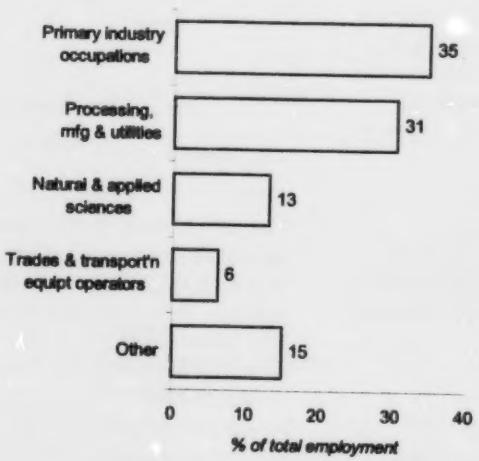
production is exported, with most (95%) of it going to the US market.

The value of farmed salmon production in the province exceeded the value of the wild salmon catch in both 1998 and 1999. This was largely a reflection of the decline in the wild salmon stock available for harvest in those years. However, the production of farmed salmon also increased significantly in those years.

Two-thirds of the people working in this industry have jobs in occupations specific to fishing or manufacturing
Figure 39

Between 1984 and 1997 (the latest year for which data on the aquaculture industry's GDP is available), the value added to the economy by BC's fish and shellfish farming industry grew from $1.6 to $68.1 million. This represented an increase that was well in excess of that seen in any other industry, including computer-related manufacturing. Without the boost provided by the aquaculture industry in the province, the overall performance of the fishing industry would have been much worse than it was during the last few years. It is likely that aquaculture activities in the province will continue to expand even if the opportunities for commercial fishing remain limited.

What are the most common occupations?



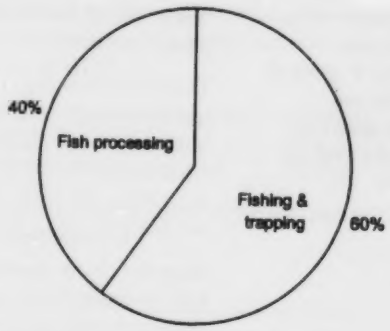
Source: COPS estimate (1998)/ 1996 Census data

Figure 39

Fishing and fish farming employ about 5,000 British Columbians
Figure 40

Most of the jobs in this industry are in occupations that are specific to fishing. More than a third (35%) of the people working in fishing are employed as skippers, masters and officers, deckhands, harvesting labourers, or in other activities specific to fishing. Just under a third (31%) are in jobs that are specific to fish processing. People with skills and training in the natural and applied sciences also make up a significant percentage (13%) of the industry's workers. Many of them are chemists and biologists, or in similar fields. Another 6% of the people working in the industry have jobs as trades and transportation equipment operators. Of the remaining 15%, business, finance and administrative workers (5%) and people with jobs in sales and services (4%) make up the largest number of workers.

How many people work in the fishery, and how much do they earn?



Total employment in 1999: 8,400

Source: Labour Force Survey/COPS

Figure 40

In 1999, there were 8,400 people employed in the province's fishing and fish processing industries. Sixty percent of the people working in this industry are employed in the commercial fishery or by fish and shellfish farms, which employed about 1,500 of the people working in this industry. The processing of fish caught by both BC and foreign fish boats accounts for 40% (3,300) of the jobs in this industry.

We don't have specific data on earnings and hours in these industries, but fish processing represents a significant component of the province's food processing industry, where wages were typically $544 for a 36 hour workweek in 1999.

Census data suggest that average wages in the fishing industry were similar to those in food processing. However a note of caution is necessary, as 1999 was not a good year for the fishery, and it's entirely possible that earnings in the commercial fishery were much lower in that year than they had been in 1995.

What are the characteristics of the work force?

Part-time work is more common in the fishing and fish processing industry than in most other types of goods production. One in four workers in this industry is employed part-time, meaning that he/she spends less than 30 hours a week on the job.

Relatively few women work in the commercial fishery (including aquaculture), where they make up just 20% of the work force. However, nearly half of the workers in fish processing plants are female.

There are some gaps in the data, but unemployment rates in the commercial fishery hovered around the 20% mark—more than twice the provincial average—during much of the 1990s. The jobless rate was similarly high in the fish processing sector.

As is the case in agriculture, self-employment is very common in this industry, accounting for about a quarter of all employment. About 40% of the people who work in the commercial fishery are self-employed, but it's less common in fish processing.

We don't have data on employment by establishment size for the fishing industry separate from logging and mining. It's likely that the profile for the fishery is more similar to that of agriculture than the other two resource-extracting industries.

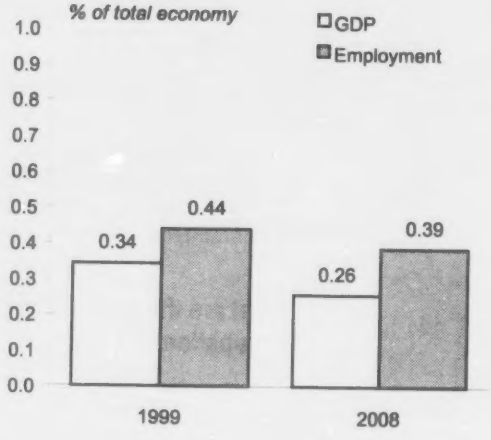
Where are the jobs located?

For obvious reasons, most fishing and fish processing activity takes place in the coastal regions of the province. Fish processing plants are located in the Prince Rupert and Vancouver areas, as well as on Vancouver Island, where the fishery plays a big role in some local economies.

Vancouver Island is the location of a large number of fish farming operations, most of which are located in Northern Vancouver Island, Clayoquot Sound and the Campbell River area. Fish farms can also be found in other coastal regions of the province. Ninety percent of the jobs in the aquaculture industry are located outside Vancouver and Victoria.

We don't have data on the regional allocation of jobs in BC for the fishery as a whole separate from logging and mining. Those industries are so much larger than fishing that the aggregated figures won't necessarily represent what's happening in BC's fishery.

What's the outlook to 2008?



Source: Statistics Canada/COPS forecast

Figure 41

Both GDP and employment in the industry are expected to grow at rates that are slightly below the provincial average
Figure 41

Despite the weak performance of the industry during the last couple of years, it's expected that both GDP and employment in the fishery will hold their own over the next few years. The industry's share of the economy is forecast to stay at just under half a percent between now and 2008.

5. An overview of the service sector

There are ten main industries in the service sector:

1. Retail & wholesale trade
2. Health & social services
3. Business services
4. Accommodation & food services
5. Amusement, recreation & personal services ("Other services" in Tables 1 and 2)
6. Education
7. Finance, insurance & real estate
8. Government services
9. Transportation & storage
10. Communications

Table 1 shows the ranking of these industries, based on employment in 1999. Also included in the table are estimates of real GDP. As you can see, the largest employer in services is the wholesale and retail trade sector, followed by health and business services. Communications, with 45,700 employees, is the smallest industry.

As was the case in the goods sector, the ranking changes considerably when real GDP is used to make the comparison. Based on GDP, finance, insurance and real estate is the largest industry in the service sector, and significantly larger than any of the goods-producing industries. However, it's ranked seventh out of ten service sector industries based on employment. In contrast, accommodation and food, which employs about 8% of the work force, makes a much smaller contribution to BC's total GDP.

Table 2 on the following page summarizes some of the key economic and labour force variables for industries within this sector.

Let's take a look at some of the industries in the service sector.

Services sector (1999 data)	Employment	% of total employment	GDP ($1992 million)	% of total GDP
Retail & wholesale trade	347,900	18.2	11,518	12.5
Health & social services	197,600	10.4	6,284	6.8
Business services	170,000	8.9	5,438	5.9
Accommodation & food	153,900	8.1	3,540	3.8
Other services	152,600	8.0	4,295	4.7
Education	123,900	6.5	5,677	6.2
Finance, insurance, real estate	106,300	5.6	17,881	19.4
Government services	90,900	4.8	5,108	5.6
Transportation & storage	90,100	4.7	5,567	6.1
Communication	45,700	2.4	3,297	3.6
Total, services sector	**1,478,900**	**77.6**	**68,606**	**74.6**
Total, goods sector	427,500	22.4	23,359	25.4
Total, all industries	**1,906,400**	**100.0**	**91,965**	**100.0**

Data source: Labour Force Survey, COPS, Statistics Canada

Table 1

Service industries... at a glance

	1999 data				Average (1990s)			
	Employ-ment	GDP ($1992 million)	Average weekly earnings	Average weekly hours	% Full-time	% Self-employed	% Male	Unemploy-ment rate
Retail & wholesale trade	347,900	11,518	495	30	76	18	55	6
Health & social services	197,600	6,284	591	29	74	11	20	3
Business services	170,000	5,438	721	33	84	34	55	6
Accommodation & food	153,900	3,540	244	24	64	10	42	10
Other services	152,600	4,295	437	26	65	39	42	9
Education	123,900	5,677	702	34	74	5	39	4
Finance, ins., real estate	106,300	17,881	746	28	82	16	39	3
Government services	90,900	5,108	797	na	92	0	55	4
Transportation & storage	90,100	5,567	835	36	89	12	80	6
Communication	45,700	3,297	776	38	91	12	59	0
Total, services sector	**1,478,900**	**68,606**	**583**	**29**	**77**	**17**	**47**	**6**
Total, goods sector	427,500	23,359	793	39	90	18	80	10
Total, all industries	**1,906,400**	**91,965**	**625**	**31**	**80**	**18**	**55**	**9**

Table 2

Retail and wholesale trade

Shopping. It's something you simply can't avoid doing. Whether it's buying food, clothing, or other necessities for your family, putting gas in your car, picking up supplies for a do-it-yourself project, getting pictures developed, or simply browsing, almost everyone uses the services of establishments in this industry. Retail and wholesale trade is the largest industry in the economy, in terms of its share of total employment. It's also one of the biggest industries when the measuring stick that's used is GDP.

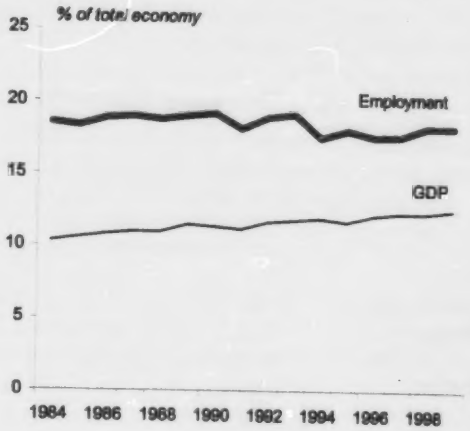
What's included in retail and wholesale trade?

While many of us think of shopping in terms of time spent at a mall, there are a lot of different places at which consumers can purchase goods. Supermarkets, gas bars, drug stores, furniture outlets, hardware stores, car lots and garden centres are only some of the types of businesses in the **retail trade** industry. It also includes vending machine operators and mail order outlets, and any other establishments that are mainly involved in selling goods for use by consumers or households.

Wholesalers usually don't sell directly to the final customer. They can be thought of as "middle men", who supply goods that will either be resold or used by a company to produce other goods. The wholesale trade industry supplies retailers with the goods that they sell. But that's only part of what's involved in wholesaling. Businesses, manufacturers, farmers, and construction companies are just some of the customers who purchase goods from wholesalers. In the case of a construction company for example, cement, plywood, nails, two-by-fours, sinks, bathroom fixtures, paint, glass, wallpaper and so on would most likely be purchased from a wholesaler. This material could then be used to build a house that would ultimately be sold to a consumer.

What's happened since 1984?

During the 1980s, and up till 1995, employment in this industry grew at about the same rate as the provincial average. However, since the mid-1990s, the number of jobs in the industry hasn't kept pace with overall employment growth, and its share of the total has fallen from a high of 19% reached in 1993 to 18% in 1999. Over the same period, the retail and wholesale trade industry's contribution to total GDP has risen steadily, growing from just over 10% in 1984 to nearly 13% in 1999.



Source: Statistics Canada

Figure 1

Employment growth has lagged slightly behind the rest of the economy, but the industry's share of GDP is increasing
Figure 1

Like many other service industries, retail and wholesale trade is fairly labour intensive. Retailers and wholesalers generally don't produce the goods that they sell. They're in the business of reselling goods that they've purchased from someone else. Selling the goods usually requires a fair amount of labour, which is one of the biggest inputs into production in this industry. Workers in the store or outlet have to stock shelves, assist customers, take inventories, register purchases, and so on. Stores need to be cleaned, window displays have to be maintained, and there are many other types of jobs that need to be done in order to attract and serve customers. It takes a lot of elbow grease to run a store. That's one of the reasons why the industry's share of total employment is so much higher than its contribution to GDP.

It should be noted that a larger than average percentage of the workers in this industry are employed part-time. The employment figures we're looking at don't differentiate between full-time and part-time workers, and as a result

the greater prevalence of part-time employment has the effect of boosting the overall job figures. Furthermore, many people working in this industry receive relatively low hourly wages. Since labour income is a big component of an industry's GDP, this has the effect of pulling down the ratio of GDP to employment. However, as Figure 2 illustrates, the industry has found ways to increase its output per employee. That's why GDP in the industry is growing faster than in the rest of the economy even though growth in the number of jobs available has lagged behind the average for all industries.

The industry is changing

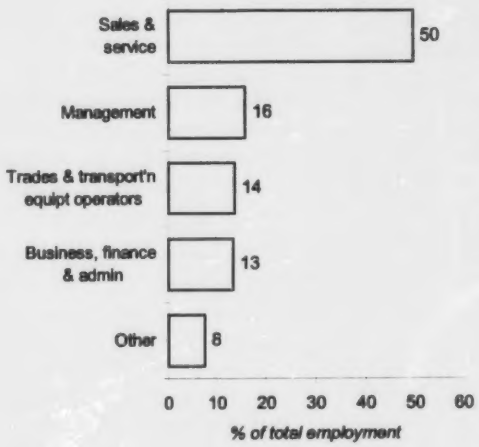
Now, more than ever before, there are many different and new ways for consumers to purchase goods. These changes mean that the distinction between wholesaling and retailing has become a little blurred. For example, big box retailers represent a departure from the traditional type of retailing, where customers expect personalized service in relatively pleasant surroundings. Big box retailing places a greater emphasis on self-service, bulk buying, or do-it-yourself assembly. Stores are typically warehouse-style with relatively little focus on ambience. Because they spend less on fixtures such as carpets, and usually have fewer floor workers than other types of retail outlets, they can often sell goods–ranging from clothing and food to furniture and appliances–at very competitive prices. Similarly, by eliminating the middle man, factory outlets are often able to offer their products to consumers at reduced prices.

Other changes in the retail and wholesale trade industry have come about as a result of the Internet, which is having a growing effect on retail activity. While e-commerce still represents a relatively small percentage of total spending, more and more people are buying products as diverse as books, clothing and construction supplies directly off the web. Some retailers and wholesalers are taking advantage of this trend. For example, large book retailers have whole divisions devoted entirely to Internet commerce. If this trend continues, the nature of work in this industry may see some significant changes during the next few years.

Other factors have influenced the retail and wholesale trade industry as well. For example, as people become more pressed for time, they're looking for ways to cut down on the amount of work they need to do to prepare meals or handle other aspects of maintaining a household. Food retailers have observed this trend. Deli departments in grocery stores used to sell mainly sliced meat and cheese. Now most of them have large sections devoted to fresh salads, casseroles, and other take-home foods that can be prepared with little additional effort required from the cook. Why might this be important to you? If you're interested in a career in cooking or food preparation, there are now more places other than restaurants, hotels, or food processing plants where your skills might be put to use. That's one of the reasons why it's important to consider current and developing trends when you're planning your career.

What are the most common occupations?

One in every two workers is in a sales or service occupation
Figure 2



Source: COPS estimate (1998)

Figure 2

Not surprisingly, sales and service occupations account for the biggest number of jobs, with one in every two people working in retail and wholesale trade engaged in these occupations. About a quarter of the people who work in the industry are retail salespeople or sales representatives. They outnumber cashiers nearly three to one.

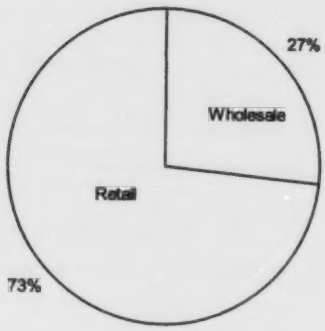
Among the other types of occupations, management (16%), trades and transportation equipment operators (14%) and business, finance and administrative workers (13%) make up the biggest groups. Other types of

occupations represent just 8% of the total work force.

How many people work in retail and wholesale trade, and how much do they earn?

Retail and wholesale trade was the province's biggest employer in 1999, with a total of 347,900 people working in the industry. Two-thirds (255,200) of the workers were in retail trade, while one in three (92,700) worked in wholesale trade establishments.

Three out of every four people in this industry are employed by retail businesses
Figure 3



Total employment in 1999: 347,900

Source: Labour Force Survey/COPS

Figure 3

Average wages and hours are quite different in the two segments of this industry. In retail trade, a typical workweek was 28 hours long in 1999, about 10% less than the all-industry average. Average wages for hourly-paid workers in this industry were about three-quarters of the average for all industries. Weekly wages reflect these differences, with workers grossing an average of $405 each week, $219 less than the provincial average.

In the wholesale trade component of the industry, workers typically spent more time on the job (36 hours) and received a higher wage, resulting in average weekly earnings of $688 in 1999.

What are the characteristics of the work force?

Part-time employment is relatively common in this industry. One out of every four people who work in retail and wholesale trade spends less than 30 hours a week on the job. This compares to one in five for the economy as a whole.

Overall, about 55% of the people who work in this industry are males, which is the same as the male-female split in the provincial work force. However, there are significant differences within the industry. In wholesale trade, seven in ten workers are male. They account for slightly less than half of the workers in retail trade.

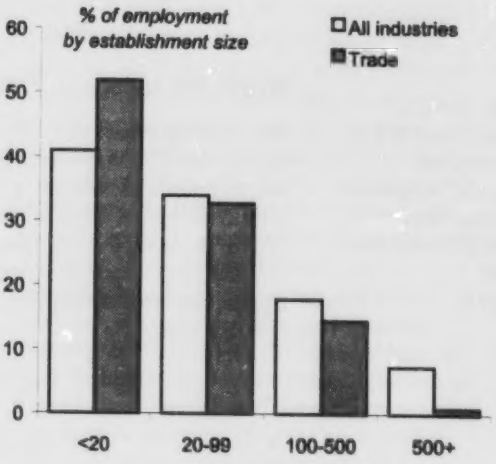
The incidence of unemployment for workers in this industry is relatively low. Between 1990 and 1998, it averaged about 6%, well below the 9% unemployment rate for the economy as a whole.

Self-employment is quite prevalent in retail and wholesale trade. One in every six people who works in this industry is self-employed. It is more commonly seen in retailing than in wholesaling.

The retail and wholesale trade industry covers everything from "mom and pop" corner stores to large department stores or wholesale distribution outlets. However, more than half of the people who work in this industry are employed at a job site where they have fewer than 20 co-workers.

It should be noted that this data doesn't include self-employed workers. About half of the people in this industry who are self-employed don't have any paid workers.

Half of the people with jobs in this industry are employed in small businesses with fewer than 20 workers
Figure 4



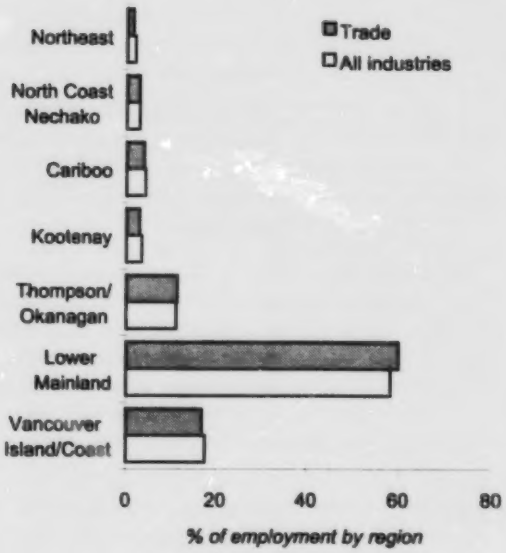
Source: Labour Force Survey (1997)
Excludes self-employed

Figure 4

Where are the jobs located?

Wholesale distribution centres are often located in highly populated areas and shipped out to smaller centres from there, but retailing activity occurs in every part of the province. Vancouver's slightly higher-than-average share of total employment may reflect this fact. However, the regional distribution of workers in this industry closely mirrors the regional distribution of the entire work force in the province.

Jobs in this industry are distributed among regions in much the same way as the province's population
Figure 5



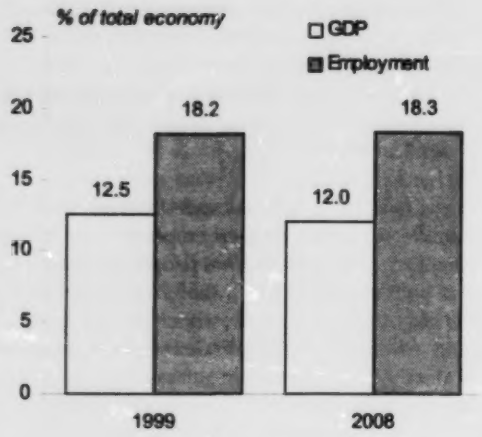
Source: Labour Force Survey (1997)

Figure 5

What's the outlook to 2008?

Both GDP and employment in this industry are expected to grow at average rates during the next few years
Figure 6

The industry's share of GDP is forecast to fall slightly (to 12%) between 1999 and 2008, while employment is expected to grow a little more than in the rest of the economy. With nearly a fifth of the work force holding jobs in this industry, it's forecast to continue to be the biggest employer in the province during the next few years.



Source: Statistics Canada/COPS forecast

Figure 6

Health and social services

A recent study indicated that during a one-year period, more than three quarters of Canadians had visited a doctor and half had been to see a dentist. Even if you don't regularly use the services of a doctor, dentist, or other health care or social service workers, there's a very good chance that at some point in your life, you will.

What's included in health and social services?

Many people equate this industry with doctors' offices, nurses and hospitals, but there's a lot more to the health and social services industry than that. People of all ages and from all social groups use these services when they:

- Get immunized at school or in a public health clinic;
- Go to a lab for x-rays or tests;
- Send their children to daycare or nursery schools;
- Are counseled by a psychologist;
- Receive assistance from a social worker;
- Call or visit a crisis intervention centre;
- Receive home care or meals-on-wheels services;
- Visit a chiropractor, physiotherapist or podiatrist;
- Have their eyes checked;
- See a doctor or dentist; or
- Receive treatment at a hospital.

It's difficult to separate the social service industry from health care, because many of the services provided by these industries are interrelated. For example, nursing homes and homes for the aged provide health care as well as a variety of social services to their residents. Similarly, psychologists and social workers are involved in the treatment of individuals in hospitals and in other health care institutions, but they also provide social services that are unrelated to health care.

What's happened since 1984?

During the last fifteen years, the health and social services industry's share of total employment has risen quite significantly. Just under 9% of the work force was employed in this industry in 1984. By 1999, the figure had risen to more than 10%. However, the industry's contribution to total GDP has fallen slightly, from more than 7% at the beginning of the period, to just under that figure by 1999.

Source: Statistics Canada

Figure 7

Employment in the health and social services industry has grown more than in the economy as a whole. This may reflect an increase in part-time employment
Figure 7

This almost certainly reflects a shift toward part-time employment in health and social services, but there are other reasons why this may be occurring, as health and social services is undergoing major changes in the way services are delivered. Population growth, the baby echo[4] effect, and other changes may also have increased the demand for daycare and nursery services, which are also included in this industry. If you follow the news, you've probably heard a lot about hospital bed closures, overcrowded emergency rooms, funding cutbacks, and debates about how to pay for health and social services. One reason for all the discussion and debate is that during the last few years, funding for some services has been reduced as hospitals and the

[4] The baby echo effect is discussed in more detail in the chapter describing the education industry.

governments who fund them seek ways to cut costs. At the same time, technological and other advances are making it possible for some services to be delivered more efficiently, or differently, than in the past.

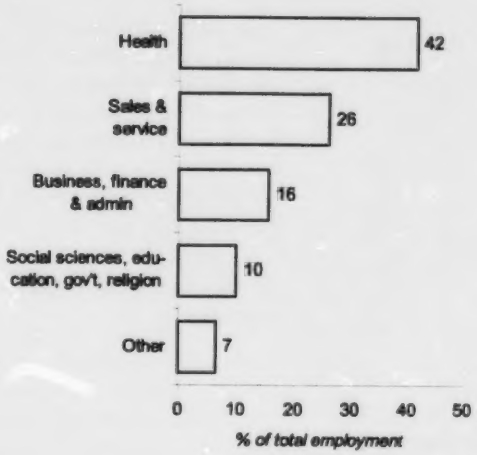
One of the most significant changes that's occurred is that many people who previously received treatment in an institutional setting are now being cared for in other facilities, including private homes. For example, advances in technology and techniques mean that many surgeries that previously required long hospital stays can be done on an out-patient basis. Patients who do require a hospital stay are often sent home to recuperate at a much earlier stage in their recovery. Rather than institutionalizing elderly people, or those with disabilities, when they can no longer care for themselves, there's more of an emphasis on providing home care, meals-on-wheels, and similar services which allow them to remain at home, in familiar surroundings.

The shift toward more day surgeries, home care and so on means that the demand for some types of health care services has changed. Instead of getting round-the-clock supervision in hospital, people recuperating at home may receive a daily visit from a nurse or other health care worker. Some of these services are being provided by private agencies, or in smaller community-based facilities, rather than in large public institutions, and many of the people doing these jobs are employed on a part-time basis. Even though they may be working fewer hours, there may be more people on the payrolls of agencies providing these sorts of services.

The private sector has also stepped in to provide services to the elderly that were previously only available in institutions. A growing number of seniors' housing complexes offer meals, laundry, housekeeping and medical services to people who might otherwise have to leave their homes. This means that some of the employment in the health and social services sector is likely to shift away from institutions and into smaller facilities, private businesses, or non-profit agencies.

Four out of ten workers in the industry are in health-related occupations
Figure 8

What are the most common occupations?



Source: COPS estimate (1998)

Figure 8

Nearly half of the people working in this industry are in health-related occupations. Within this group, nurses make up the biggest share of the total, followed by nursing aides and orderlies, lab and other health technicians, doctors and surgeons, and other health care professionals.

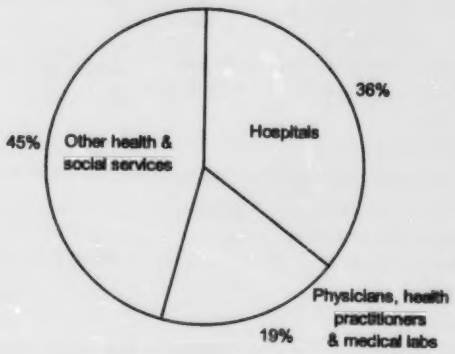
The large number of people in sales and service occupations may seem surprising. Most of them work in the other health and social services component of this industry, and by far the biggest number have jobs in early childcare education, as home care workers, or as nannies who are employed by social service agencies. In addition, there are a number of people who work as cleaners, food service workers and in other service occupations. Together, these people make up 26% of the work force in the health and social services industry.

Sixteen percent of the work force is employed in business, finance and administrative (16%) occupations. Most of the 10% of the workers who are in social sciences and related fields are social workers or other types of counselors. Management occupations account for more than half (4%) of the remaining 7% of the work force in this industry.

How many people work in health and social services, and how much do they earn?

Health and social services was the province's second biggest employer in 1999, with 197,600 people holding jobs in this industry. Hospitals employ just over a third of the people working in this industry. In 1999, hospital workers held 36% of the jobs in this industry. Doctor's and surgeons offices, medical labs, and offices of other health practitioners such as chiropractors, optometrists, and physiotherapists provided jobs for 19% of the work force. However, nearly half (45%) of the people working in the health and social services industry were employed by other types of health care and social service providers. This includes nursing homes and other institutions, home care services, daycares, or other similar establishments.

Just over half of the people working in the industry are employed at hospitals or in medical offices
Figure 9



Total employment in 1999: 197,600

Source: Labour Force Survey/COPS

Figure 9

Weekly earnings in the health and social services industry averaged $591 in 1999, but were much higher ($708) in the hospital sector. Hourly wages for non-salaried workers were well above the provincial average of $15.70, averaging $19.40 an hour for the industry as a whole. The standard workweek was 29 hours long.

What are the characteristics of the work force?

About a quarter of the people who work in BC's health and social services industry are employed part-time. This is similar to the average for all service industries, but somewhat higher than in the economy as a whole, where one in every five people works part time.

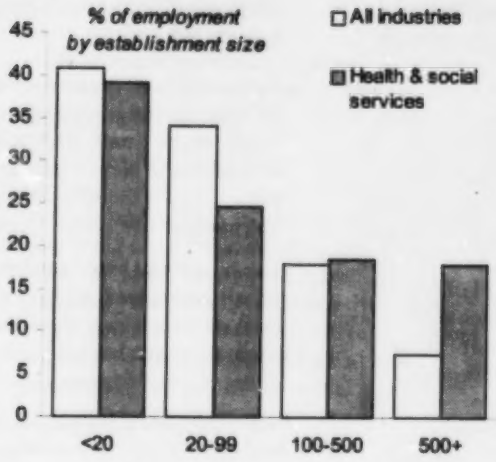
The health and social services industry remains female-dominated. Eighty percent of the workers in this industry are female, a percentage that has been quite consistent during the last fifteen years.

The industry's unemployment rate has remained relatively low during the 1990s, averaging about 3%, less than a third of the provincial average of 9%.

Self-employment in the industry is increasing, but represents a relatively low percentage of the work force compared to some other service industries. About 11% of the people working in health and social services are self-employed. The reason the figure is so low is that hospitals and other institutions account for such a large percentage of total employment in the sector. Nearly half of the people who work in the offices of social service and health practitioners are self-employed, as is one out of every four people who work in a doctor's office.

Because so many health care and social service workers are employed at hospitals and other institutions, a lot of people in this industry work at a job site where there are a large number of employees. More than a third of the employees in this industry work in an establishment with at least 100 other people on the payroll. However, small establishments employ more than a third of the workers in this industry.

People who work in this industry are more likely to be employed at a large establishment such as a hospital
Figure 10



Source: Labour Force Survey (1997)
Excludes self-employed

Figure 10

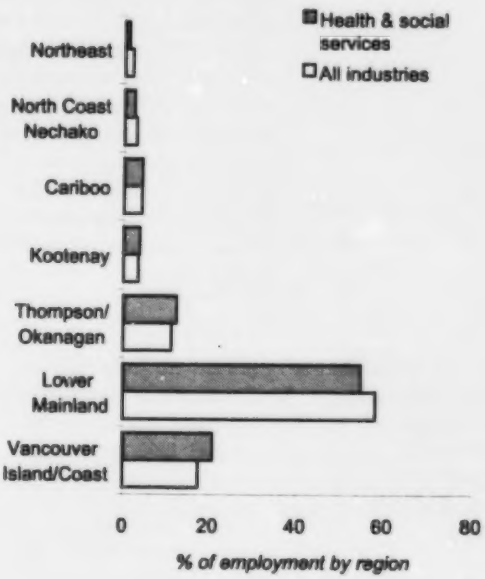
Where are the jobs located?

Nine out of every ten jobs in this industry are in the Lower Mainland, Vancouver Island/ Coast and Thompson/ Okanagan regions
Figure 11

Generally speaking you'd expect the jobs in this industry to be allocated by region in roughly the same proportion as the population as a whole. While that is basically true, there are some variations. For example, both Thompson/Okanagan and Vancouver Island/Coast account for a bigger share of total employment in this industry than their share of total employment in the province. On the other hand, the Lower Mainland's share is slightly smaller. This may be due to the fact that industries such as business and financial services are concentrated in the Lower Mainland, boosting its share of total employment.

Some treatment facilities are much more likely to be located in larger centres such as Vancouver and Victoria, where the population is big enough to support the purchase of special equipment and there are people with the training needed to provide specialized services. Larger hospitals and other health care institutions typically provide services to the local population as well as to people coming from rural areas or smaller centres. Similarly, the location of the province's only medical school in Vancouver means that some types of health care services may only be available in the Lower Mainland region.

Since health care needs tend to increase with age, it is very likely that the demand for these services will be somewhat greater in areas where there are more older people, such as on the Island and in Thompson/Okanagan, where there are some big retirement communities. Finally, it's important to remember that the demand for some types of social services may be greater in rural and remote areas than in other parts of the province.



Source: Labour Force Survey (1997)

Figure 11

What's the outlook to 2008?

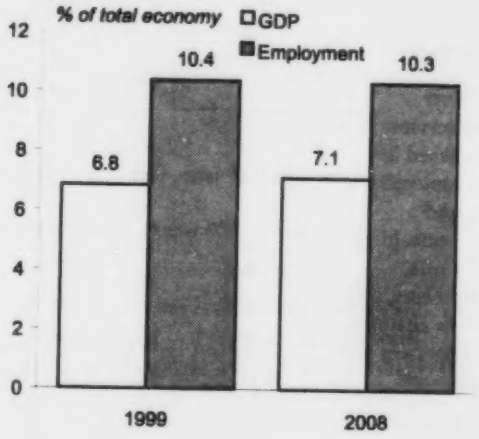
The need for health care and social services doesn't vary a lot with the state of the economy. People get sick or use social services like daycare whether the economy is growing or contracting. That's one of the reasons why the forecast for this industry is for employment growth that is more or less equal to the provincial average. However, it's expected that there will be some productivity gains in the provision of health and social services, and the industry's share of total GDP is forecast to rise slightly during the next few years.

Most analysts anticipate that the demand for health and social services will increase over time. The ageing of the population is expected to continue to put pressure on the health care system. Statistics indicate that a significant

percentage of total lifetime healthcare costs occurs in the last year of a person's life. As people age, they are also more likely to require social services such as home-making or meal services.

Employment in this industry is expected to grow at average rates, while the industry's share of total GDP is forecast to increase slightly
Figure 12

From this, you might conclude that health care is one sector where the need for workers is more likely to increase than to decline. That is probably true. Like education, health care and social services will always be in demand.



Source: Statistics Canada/COPS forecast

Figure 12

Business services

The industry's share of total employment has doubled since 1984
Figure 13

A lot of very different types of activities are included in this industry, ranging from computer programming and software design to personnel and management services. The industry's been expanding at a rapid clip, largely due to the development of the computer industry, but also because other services provided by the industry are increasingly in demand.

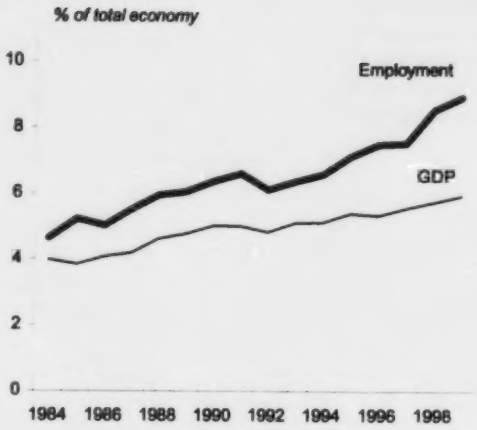
What's included in business services?

Just what are business services, anyway? They're establishments that provide services that are usually, but not always purchased by other firms. The industry includes employment and personnel agencies, accounting and bookkeeping services, management consulting and advertising services. Computer firms, offices of lawyers, architects and engineers, and various other types of services such as customs brokerage and telephone answering services are also part of the business services industry.

It's quite common for firms in this industry to work under contract to other industries, as well as providing services to individuals and government ministries on an ad hoc basis. The main characteristic distinguishing firms in the business services sector isn't who their clientele is, but what sort of services they provide.

What's happened since 1984?

Business services has seen some fairly major changes during the last decade and a half, largely due to the emergence of the computer industry as an increasingly important driver of the economy. At the same time, many firms in other industries have stopped maintaining in-house access to professionals such as accountants or lawyers, choosing instead to contract for these services on an as-needed basis. Both of these factors have contributed to the growth of BC's business services industry.



Source: Statistics Canada

Figure 13

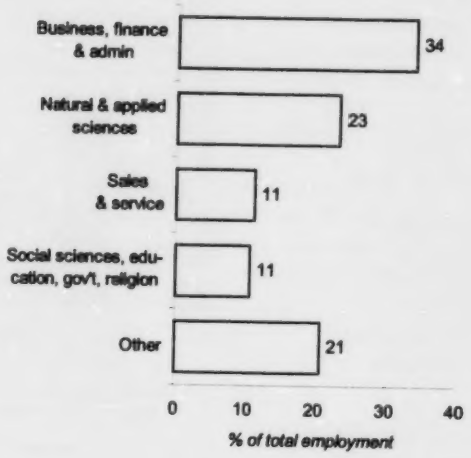
Between 1984 and 1999, business services doubled its share of total employment in the province. In 1984, less than 5% of the work force was employed in these industries. By 1999, one in every 11 workers (9%) had a job in a business service industry.

The increase in the industry's contribution to total GDP has been nearly as remarkable, rising from 4% to 6% during the last fifteen years. The computer services component of this industry group has expanded even more, growing by a factor of seven. It's not yet the biggest industry within this group, but if recent trends continue, it may well become that soon.

During the same period, the output of the architectural, scientific and engineering firms and other miscellaneous business services industries has more than doubled. This compares to growth of just under 60% for the economy as a whole between 1984 and 1999.

What are the most common occupations?

Nearly 60% of the jobs are in business, finance and administration or in the natural and applied sciences
Figure 14



Source: COPS estimate (1998)

Figure 14

Within this industry, business, finance and administration is the biggest occupational group, accounting for just over a third (34%) of total employment. This group includes accountants, bookkeepers, business management professionals, secretaries, clerks, and so on.

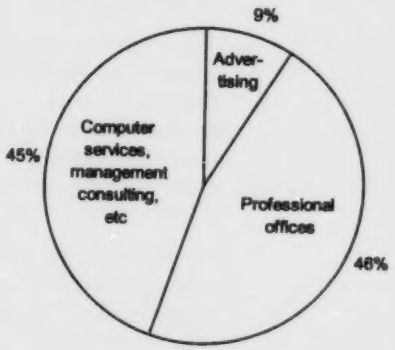
Just under half of the people in this industry work in accounting, engineering, legal and other professional offices
Figure 15

Engineering offices, architects, and computer business employ a lot of people with training or skills in the area of natural and applied sciences. People working in these types of occupations make up nearly a quarter (23%) of the work force in the industry.

Sales and services (11%) and occupations in the social sciences and related group (11%) employ roughly equal numbers of people. Most of the workers in the latter group are lawyers and paralegals. Among the remaining 21% of the workers in this industry, management (9%) and arts-related occupations (4%) such as graphic design account for the biggest shares of total employment.

How many people work in business services, and how much do they earn?

Business service industries employed 170,000 British Columbians in 1999. Accountants, architects, engineers, lawyers and other business professionals make up just under half (46%) of the total work force. A similar number (45%) of the industry's workers have jobs in computer services, management consulting, employment and personnel agencies, collection agencies or in other organizations providing services to business. Advertisers employed the remaining 9% of the industry's workers in 1999.



Total employment in 1999: 170,000

Source: Labour Force Survey/COPS

Figure 15

Weekly earnings in this industry averaged $721 in 1999. This was 15% above the average for the economy as a whole, reflecting somewhat higher hourly earnings for non-salaried employees and a standard workweek (33 hours) that was longer than in many other service industries, and exceeded the provincial average by about two hours.

There's considerable variability in terms of average earnings within this industry group, which is at least partly due to differences in the types of skills and training of the workers in these businesses.

People working in computer services ($898), in the offices of architects and engineers ($882), accountants ($768) or in legal ($733) offices earned relatively high wages. Those with jobs in employment agencies ($433) and other types of business services ($465) usually took home a much smaller pay packet. It's important to keep in mind that these average weekly earnings don't mean that everyone in the industry receives similar wages: they represent the average of wages paid to all workers, from the clerical staff up to the company director.

What are the characteristics of the work force?

Most (84%) of the people who work in the business services sector have full-time jobs. Part-time work arrangements are less common than in many other service sector industries.

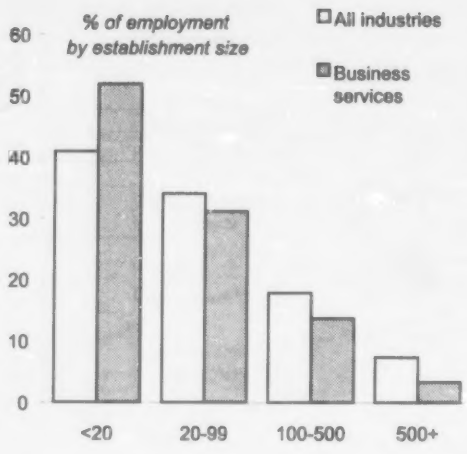
The male-female ratio is the same as the all industry average. Fifty-five percent of the people who work in business services are male.

Unemployment rates in the industry averaged about 6% during the period from 1990 to 1998. This was below the provincial rate of 9% for the same period, but higher than in other service industries, such as health and education, where there are also large numbers of highly trained workers.

One in every three workers in this industry is self-employed. This represents a bigger share of the work force than in most other industries. The average for all industries in the province is about 18%.

Establishments in business services tend to be relatively small. More than half of the people who are employed in business services work in offices with fewer than 20 people. This is partly due to the nature of the work. Many legal, accounting, engineering and architectural firms are small operations where one or more professionals works with a small staff of clerical workers or other assistants. Similarly, consulting and computer programming firms don't necessarily require a lot of support staff to get things done. The success of home-based businesses in this industry, many of which have grown out of a small office in someone's basement, has been well documented in the media.

Establishments in business services tend to be smaller than in other industries
Figure 16



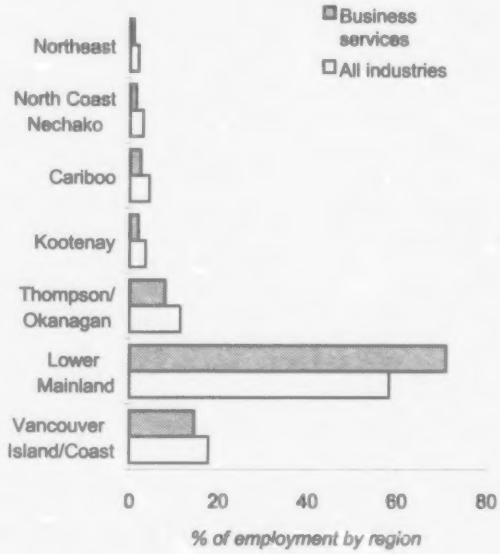
Source: Labour Force Survey (1997)
Excludes self-employed workers

Figure 16

Where are the jobs located?

Many business service establishments are located in the Vancouver area where the number of potential clients is highest, and where many of the industries that use their services are also located. However, business service establishments are found in all areas of the province.

Seven out of ten workers in business services are located in the Lower Mainland
Figure 17



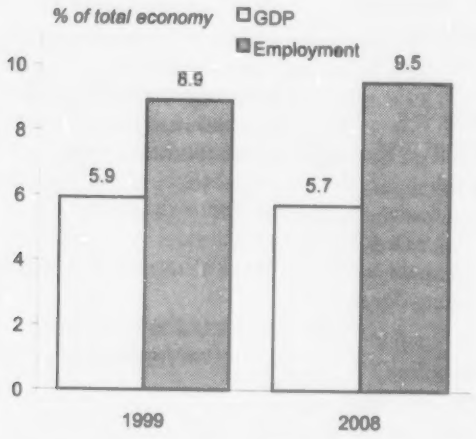
Source: Labour Force Survey (1997)

Figure 17

What's the outlook to 2008?

Employment in business services is expected to continue to grow faster than the average for all industries
Figure 18

During the next few years, it's forecast that employment growth in this industry will continue to outpace gains in the economy as a whole. The industry is forecast to employ nearly a tenth of the work force by 2008, increasing its share of total employment by more than half a percentage point. However, GDP growth isn't expected to keep pace with the rest of the economy, and as a result it's anticipated that output in this industry group will represent a slightly smaller share of the total (5.7%) in 2008 than it did in 1999 when its share was just under 6%.



Source: Statistics Canada/COPS forecast

Figure 18

Accommodation and food services

In the first chapter of this book, we talked about the effect that changes in people's lifestyles can have on the economy. Accommodation and food services is a good example of an industry that's grown as a result of changes in the way we do things.

Not that long ago, people used to eat most of their meals at home, going out to restaurants only on special occasions. But with the increase in the number of two-income families, there was less time to prepare meals. People started buying more convenience foods like frozen dinners, or taking fast foods home with them. They also began to eat out at full-service restaurants more often. Most people now eat out, or buy prepared foods, at least once a week, and many visit sit-down or take-out restaurants much more frequently than that.

The result of this change in habits was rapid growth in the food services industry over the last few decades. While the growth isn't likely to continue at the same pace as in the past, it's also unlikely that people will stop eating out in the foreseeable future.

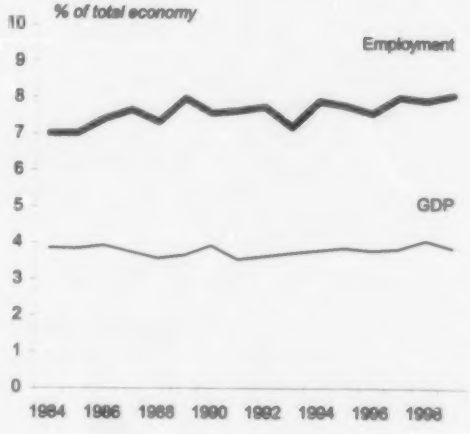
People are traveling more than ever before, both within the province, in the rest of Canada or the US, and overseas. It's a lot easier to do than it used to be. When they travel, they need a place to stay, and they're likely to eat at least some of their meals at restaurants. It's estimated that three out of every four dollars spent in restaurants come from local patrons, while tourists or business travelers account for about a quarter of these expenditures.

We're not the only ones who are finding that it's easier to travel now than it used to be. BC has become an international tourist destination. Our location on the west coast of Canada means that many visitors from Asia and the Pacific Rim first enter Canada through Vancouver's airport, and a lot of them spend at least some time in this province. This has helped boost the province's accommodation and food services industry, as well as many other industries that provide goods and services to tourists. Whistler/Blackcomb and other ski resorts are becoming more popular with overseas visitors, which has also helped boost tourism in the province.

What's included in accommodation and food services?

The accommodation and food services industry includes various types of **food service** establishments, ranging from licenced restaurants to fast food outlets and take-outs. It also includes night clubs, bars and pubs, as well as catering firms. The **accommodation** component of this industry includes hotels, motels, lodges, campgrounds, bed and breakfasts, hunting and fishing camps, and other establishments offering lodging services. It's worth noting that establishments are classified to industries based on what their main activity is. For example, someone who works for a restaurant that's part of a hotel is considered to be employed by the accommodation services industry, since the main activity of the hotel is to provide lodging services to its guests.

What's happened since 1984?



Source: Statistics Canada

Figure 19

Employment in accommodation and food services has grown a little faster than in the rest of the economy
Figure 19

Accommodation and food services has seen changes similar to those in other people-oriented industries during the last fifteen years. Employment has increased faster than the all-industry average, but GDP hasn't grown as much. One in every thirteen people with jobs in BC is employed in the accommodation and food services industry. It generates about 4%

of the province's total gross domestic product. The accommodation and food and beverage service components of this industry grew at similar rates during the period from 1984 to 1999.

Eight out of ten workers are employed in sales and service occupations
Figure 20

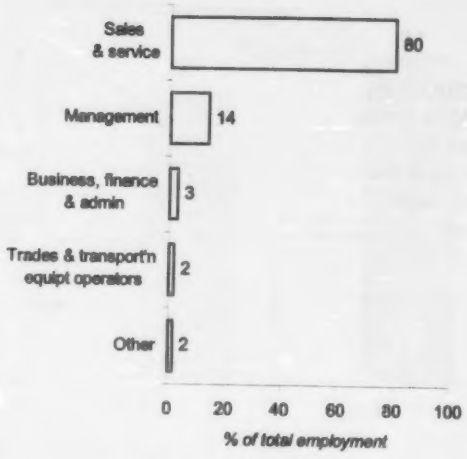
The wide gap between the industry's GDP and employment shares reflects the fact that accommodation and food services is an industry that's extremely labour-intensive. You can't prepare and serve meals, or offer accommodation services without employing a lot of staff. However, many of the people working in the industry have part-time jobs, and receive low hourly wages, so while they boost the job count, the value of their services doesn't have nearly as big an effect on the industry's GDP.

The province's accommodation industry has seen some structural changes during this period. At one end of the spectrum, a lot of new, large hotels have been built to meet the growing demand for accommodation services in places like Whistler. At the other end of the spectrum is the B&B phenomenon, which is becoming an increasingly popular option for travelers who don't want to stay in a big hotel.

What are the most common occupations?

More than in any other industry, one occupational group dominates the work force in the accommodation and food services industry. Eight out of every ten workers in this industry are in sales and service occupations. Twenty percent are food and beverage servers, 14% are cooks, and another 14% work at food service counters. Other food- and accommodation-related services account for most of the remaining 32% of the industry's work force that is in a sales or service occupation.

After sales and services, management positions (14%) account for the biggest percentage of the work force. The remaining 6% of are employed in various other occupations.



Source: COPS estimate (1998)

Figure 20

How many people work in accommodation and food services, and how much do they earn?

In 1999, BC's accommodation and food services industry employed 153,900 people. Three-quarters of them worked in food and beverage services.

Hourly wages in the industry are quite low, especially in the food and beverage services component, where the typical worker received $7.70 per hour in 1999. This was less than half the provincial average of $15.70 for hourly-paid workers. Food and beverage service workers also put in a fairly short workweek of just 23 hours in 1999. As a result, weekly wages averaged just $220 in this industry.

Workers in accommodation services received somewhat higher hourly wages (averaging $10.20 an hour) and typically spent more time (29 hours) on the job each week. Their gross pay averaged $342 weekly in 1999.

Four-fifths of the work force in this industry is employed in food and beverage services
Figure 21

Total employment in 1999: 153,900

Source: Labour Force Survey/COPS

Figure 21

Wages in accommodation and food services are well below the levels seen in most other industries. However, it's expected that workers, especially those in the food services industry, will be able to supplement their earnings with tips received from customers. Some food and beverage service workers derive more of their income from this source than from the wages that they're paid by their employers.

What are the characteristics of the work force?

A third of the people who work in the accommodation, food and beverage services industry are employed part-time. Part-time work is more common in this industry than anywhere else in the economy.

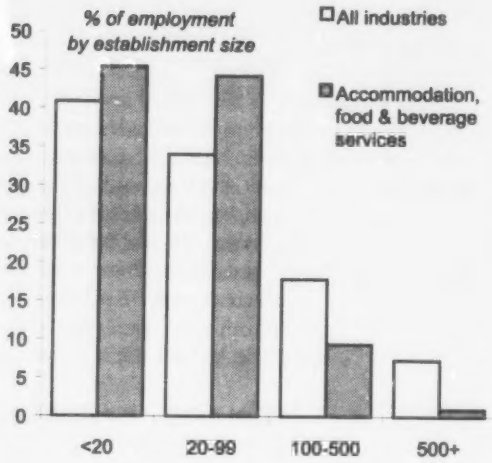
More women than men work in this industry. There are three female workers for every two males who have jobs in accommodation or food and beverage services.

Accommodation and food service workers are more likely to face periods of unemployment that those with jobs in other service sector industries. During the period from 1990 to 1998, the industry's unemployment rate averaged just under 10%, one percentage point higher than the provincial rate.

Relatively few people (about 10%) who work in this industry are self-employed. It's more common in the accommodation services industry, where many operators of trailer courts, campgrounds, lodging houses, B&Bs and vacation camps are self-employed.

Forty-five percent of the employees in this industry work in small establishments, where they have fewer than 20 co-workers. A similar percentage has jobs in larger operations, where there are between 20 and 99 employees. The nature of the service that's offered in this industry is such that there are very few establishments with more than 500 employees in the province.

Most people who work in the industry are employed at relatively small establishments
Figure 22



Source: Labour Force Survey (1997)
Excludes self-employed

Figure 22

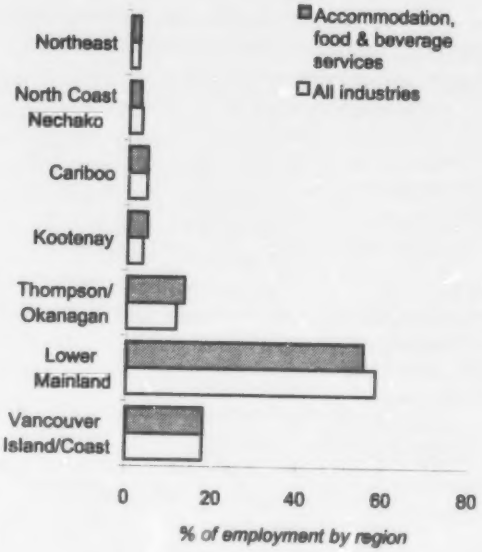
Where are the jobs located?

The demand for accommodation and food services is related to the size of the population living in an area. However, hotels, motels and other types of accommodation are also located at or near popular tourist sites. For example, there are several large hotels in the Whistler area, which have been built to accommodate skiers in that resort town. Similarly, there are fishing lodges in small towns and out-of-the-way areas that have been built to serve the sport fishing industry.

As you can see in the figure below, Thompson/Okanagan accounts for a bigger than average share of total employment in this industry. There may be a number of factors that make the region a popular spot for tourists. However, its higher-than-average share

of the industry's employment is almost certainly related to the fact that the area is a frequent stopping point for travelers who are driving or traveling by train between Vancouver and Calgary. The route is a popular one. Many visitors to the province–from overseas and from other parts of the country–choose to drive through the mountains in order to experience the Canadian Rockies.

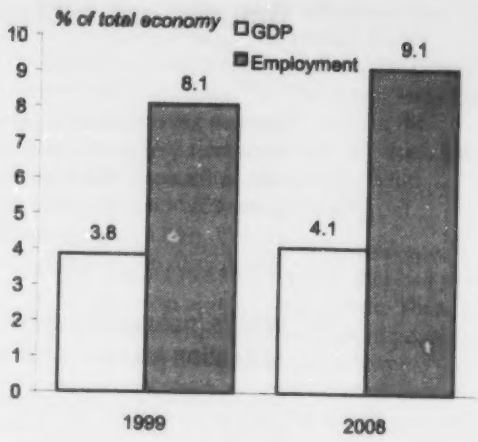
The Lower Mainland's share of employment in this industry is slightly lower than its share of total employment in the province
Figure 23



Source: Labour Force Survey (1997)

Figure 23

GDP and employment in accommodation and food services are expected to grow at faster-than-average rates during the next few years
Figure 24



Source: Statistics Canada/COPS forecast

Figure 24

What's the outlook to 2008?

The accommodation and food services industry's share of total employment is expected to continue to grow during the period from 1999 to 2008. Forecasters predict that 9.1% of the work force will be employed in this industry by 2008, up from 8.1% in 1999. The industry's share of GDP is also expected to rise, but not as much. It stood at just under 3.8% in 1999, but is forecast to rise to 4.1% by 2008.

Amusement, recreation and personal services

Did you know that more people work in amusement, recreation and personal services than in forestry? This industry group employed nearly 50% more people than the forest sector in 1999. And it's one of the fastest-growing industries in the province.

What's included in amusement, recreation and personal services?

What sorts of services are produced by this industry? It includes a number of small industries providing services that are usually purchased by individuals rather than businesses.

About a third of the people working in this industry group are employed in **personal and household services**. They work at hair salons and barber shops, shoe repair places, laundries, drycleaners and carpet cleaning outfits. Some are employed by funeral homes or cemeteries. In addition, the industry includes people who have jobs cooking, cleaning and providing other domestic services to private households.

Theatre companies, ballet troupes, sports clubs, casinos and movie theatres are included in the **amusement and recreation** component of the industry.

Other types of establishments in this industry include **membership organizations** (religious organizations, business associations and political, civic and labour organizations), and **miscellaneous services** such as those of travel agents, photographers, and car, truck or other rental agencies.

What's happened since 1984?

The amusement, recreation and personal services industry has increased the size of its work force quite substantially since the mid-1980s. The industry's share of total employment has risen by more than a percentage point to 8%. Its contribution to total GDP hasn't grown quite as much, increasing by about half a percentage point to just under 5%.

Unlike health care or education, the services provided by firms in this industry are somewhat discretionary. This means that consumer spending on these services can fluctuate quite a bit. When times are bad or money is tight, one of the first things that people cut back on is their entertainment budget. They might not necessarily go to the movies or work out at the gym. Or, they could choose to clean their house themselves rather than pay someone to do it for them.

You can see the effect of this in Figure 25, which shows how the industry's share of GDP and employment changed between 1984 and 1999. BC experienced three economic slowdowns during this period: one in 1986 and another, less extreme, downturn in 1991. Economic growth also slowed towards the end of the last decade, although the economy did not actually fall into a recession.

Source: Statistics Canada

Figure 25

Employment in this industry is subject to wider swings during economic downturns than in the economy as a whole
Figure 25

In each of these periods you can see that employment in amusement, recreation and personal services was much more significantly affected than in the economy as a whole. The industry's share of all jobs in the province dropped sharply between 1986 and 1988, and didn't recover to the 1986 level until nearly ten years later. It dipped again at the beginning and end of the 1990s. While the effect on GDP wasn't as marked, it can also be seen in the graph.

Despite these swings, the industry has experienced relatively strong growth over the long run

If it's so volatile, why has this industry seen relatively strong long-term growth during the last fifteen years of the 20th century? One of the more important reasons for this is the increased participation of women in the labour force. The number of families where both parents work has continued to grow since the early 1980s, as has the number of single-parent families. What's more, single- and two-parent families with young children spend a lot of time ferrying them to and from school and other activities. All of this means that people just don't have the time or energy to do some of the things that stay-at-home-moms used to look after. That's why they hire carpet-cleaners and housekeepers, or send their clothes out to a laundry.

But that's only one factor that helps explain what's happening in this industry. There are many others, including:

- Changes in values and interests. There's a much greater emphasis on physical fitness than there used to be. Many people regularly play sports or work out at recreation clubs and gyms that can be found in almost every city and town.
- The development of technologies that have created video and laser games and resulted in the establishment of the video arcade business.
- The development of a film industry in the province. A number of Canadian and US-made feature films and TV series are now being shot in the province.
- The legalization of lotteries and other forms of gambling, which has led to the creation of a whole new industry that accounts for an ever-expanding share of personal spending.

All of these changes have occurred within the last two decades. Given their significance, it's hardly surprising that this industry has substantially increased its share of total employment.

New technologies have had a big effect on the entertainment industry

One of the most revolutionary developments of the 20th century was television. It has had an enormous effect on how people spend their leisure time and has greatly influenced the values of our society. The average British Columbian spends nearly a full day (21 hours) every week watching TV. That might seem like just an interesting statistic to you, but it's important. Our fascination with television has been a major factor in the growth of the amusement and recreation industry.

Take VCRs, for example. Fifteen years ago, if people wanted to watch a movie, they had to go to a drive-in or to a movie theatre. Then VCRs became affordable and a lot of people started buying them. They had to have something to watch, so movie makers started producing videos. At first, the videos were very expensive; and most people couldn't afford them, so the movie rental industry was started. Initially, it was only possible to rent older movies. As time passed, the lag between when a movie was first released and when it came out on video became shorter and shorter. More and more people decided to wait until the video was released rather than watching a movie in the theatre. As a result, attendance in movie theatres decreased. Today, there are hardly any drive-in theatres left, and movie attendance has been dropping. Attendance levels at cultural events such as concerts, the opera, live theatre, and ballet have also declined.

What happened in the movie industry is a good example of how the economy adapts to change. The development of a new product (the VCR) caused the demand for a service (movie screenings) to fall, but at the same time led to the creation of a new industry (video rentals and sales) which ultimately has contributed to the growth of the industry. Changes like this don't just affect the people who run businesses; they have a very large effect on the work force as well.

Things continue to change. Now videos and VCRs–the new technology of less than 20 years ago–are being replaced by a new and better product that's on the market: the DVD. It's unlikely that the introduction of this product will have as big an effect on society, but it will nonetheless almost certainly lead to more adaptation within the industry.

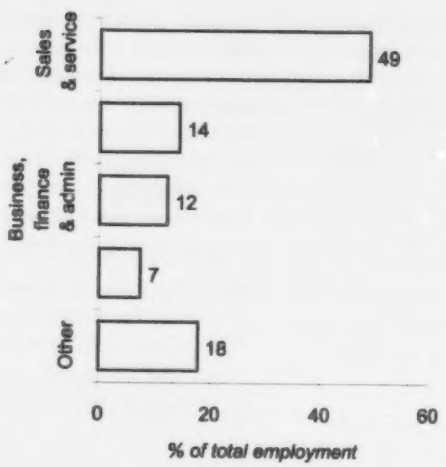
What are the most common occupations?

Half of the people with jobs in this industry work in sales and service occupations. Many of

them are janitors and building superintendents (9%), barbers and hairstylists (7%), or babysitters and nannies (7%). Various other sales and service occupations are also well represented in this industry.

Fourteen percent of the people with jobs in the amusement, recreation and personal service industry are in arts, culture and recreation-related occupations. They're recreation program workers, painters, musicians, writers, photographers, and workers in various similar types of occupations. Business, finance and administrative positions are occupied by 12% of the workers, while 7% have managerial jobs. Tradespeople (5%) and workers in social sciences and related occupations (5%) account for more than half of the remaining 18% of the work force.

Sales and service occupations dominate the industry, accounting for about half of total employment
Figure 26



Source: COPS estimate (1998)

Figure 26

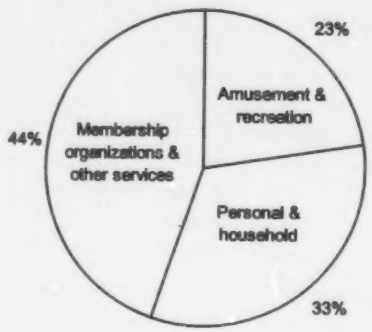
How many people work in amusement, recreation and personal services, and how much do they earn?

One in three workers in this industry is employed providing personal and household services to individuals
Figure 27

The amusement, recreation and personal services industry employed 152,600 people in the province in 1999. Of this total, 34,500 worked in amusement and recreation, 49,900 in personal and household services, and 68,200 in other firms providing services mainly to households and individuals.

Workers in the industry spent an average of 23 hours on the job in 1999, and typically earned $437 per week, about two-thirds as much as the average for all industries in the province. This relatively short workweek was typical in most parts of the industry.

Weekly earnings typically fall below the provincial average. The exceptions are people working in the motion picture production and distribution industry, who grossed an average of $653 weekly in 1999, and those who worked for funeral homes and crematoriums, where weekly earnings averaged $708.



Total employment in 1999: 152,600

Source: Labour Force Survey/COPS

Figure 27

At the other end of the scale, workers in the motion picture exhibition industry put in a slightly shorter workweek, for which they received an average wage of $253 in 1999. In the rest of the industry, weekly earnings ranged from $356 for people working in amusement services such as bowling alleys and video arcades to $521 a week for those employed by religious organizations or other types of associations.

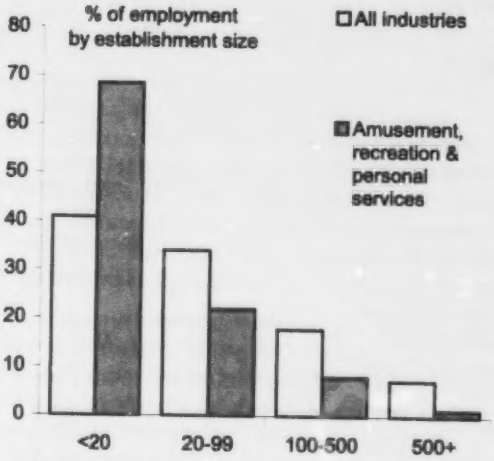
What are the characteristics of the work force?

About a third of the people who work in this industry have part-time rather than full-time jobs. That's more than in any other industry except accommodation and food services. Women outnumber men three to two.

During the period from 1990 to 1998, unemployment in amusement, recreation and personal services averaged 9%, which was equal to the average for all industries in the province.

Nearly 40% of the people who work in this industry are self-employed, more than in any other industry except farming, and similar to the percentage of self-employed workers in construction. It's particularly prevalent among photographers and performing artists, as well as in the motion picture industry. Many of the people who work in hair salons and repair shops, or in similar types of personal services are also self-employed.

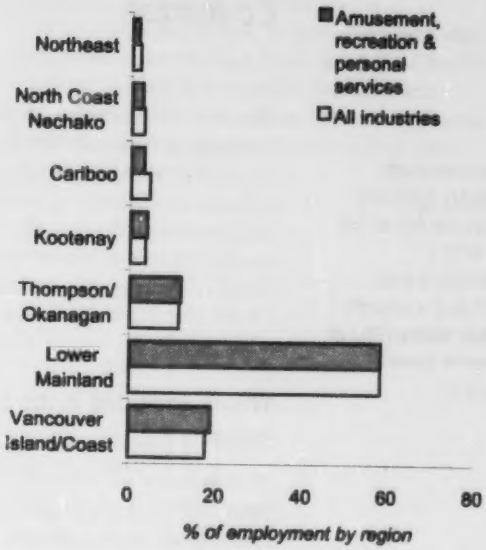
Most establishments in the industry are relatively small
Figure 28



Source: Labour Force Survey (1997)
Excludes self-employed

Figure 28

The regional distribution of employment in this industry is similar to the average for all industries in the province
Figure 29



Source:Labour Force Survey (1997)

Figure 29

Because the services offered by many of the businesses in this industry tend to be very personalized, establishments typically aren't that large. Seven out of ten people who work as employees in this industry have fewer than 20 co-workers.

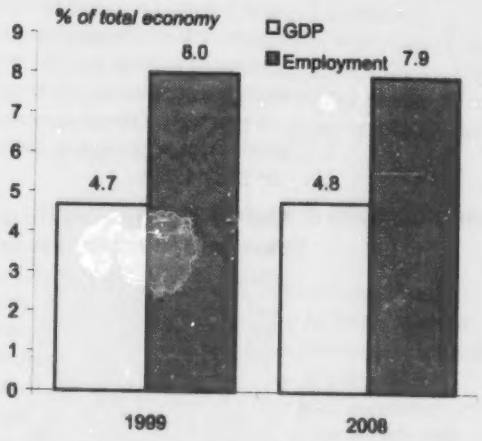
Where are the jobs located?

The location of establishments in the amusement, recreation and personal services industry is very similar to the average for all industries in the province. The slightly higher than average number of jobs in Thompson/ Okanagan is almost certainly related to the fact that the BC Lottery Corporation has its headquarters in that region.

What's the outlook to 2008?

The industry is expected to grow at about the same rate as the rest of the economy during the next few years. Its share of total employment is forecast to remain stable at about 8%, while just under 5% of the economy's total value added is expected to be generated by the industry.

The amusement, recreation and personal services industry is expected to grow at average rates during the next few years
Figure 30



Source: Statistics Canada/COPS forecast

Figure 30

Education

The education industry typically accounts for about 6% of the province's total GDP and a slightly higher share (7%) of its work force
Figure 31

Teachers, university professors, librarians, theologians, museum workers, archeologists, archivists, secretaries, janitors, driving instructors, hairstylists, cooks, ballet dancers and musicians. Sounds like a pretty diverse group, doesn't it? Yet any one of these people could be employed in the education industry. That's because the industry is defined not by what people do, but by where they work.

What's included in the education industry?

This industry includes any institution or other organization that's primarily involved in teaching or training people. In addition to the obvious establishments (schools, colleges, universities and technical institutions), libraries, museums and archives, and organizations providing business or drivers education, music, dance, or acting lessons, and other types of training are included in the education industry.

What's happened since 1984?

About 6% of the province's total GDP originates in this industry. A slightly higher percentage (7%) of the work force is employed in education. As illustrated in Figure 31, the industry experienced some ups and downs during the last fifteen years of the 20th century. In the mid-1980s, employment growth wasn't as fast as in the rest of the economy. However, job growth in education began to outpace the provincial average in 1987 and this higher-than-average growth rate was maintained for about ten years. As a result, education's share of the work force rose back to the level it was at in the early 1980s.

The job growth during the late 1980s and the first half of the 1990s was almost certainly related to BC's rapid population gains during that period. Similarly, the slowdown in employment and GDP growth seen in the late 1990s came at a time when the number of people relocating to BC from other countries or other parts of Canada began to level off. In addition, an increase in the number of part-time workers and the baby echo effect also help explain this phenomenon.

Source: Statistics Canada

Figure 31

As in health care, most of the funding for education comes from the provincial government. During periods of budgetary restraint, governments have sometimes had to cut back on their funding to various educational institutions. This has affected both the number of jobs and the range of services that are provided by school boards and post-secondary institutions in all parts of the province.

Like many other industries, education has undergone major changes during the last couple of decades. Did you know that at one time, teachers didn't have to pay into unemployment insurance because it was assumed that they would never be out of work? That's far from the case today. Having a teacher's certificate no longer means that you can find a job almost anywhere you want to go.

Baby boom, bust and echo

Some of this, at least, is related to the ageing of the population. You've probably heard people talk about the baby boom, which occurred from about 1945 to the mid-sixties. After the Second World War, when soldiers returned home to their families, the birth rate went up. Large families with four or more children were quite common. The population was relatively young, and it was growing fast.

During the 1970s, things started to change. People began to put off having children until they were older. Families with three or more children became much less common and the growth spurt in the population was stopped. That period is called the baby bust.

More recently, we've seen increases in the birth rate–the so called "baby echo"—as baby boomers have had children of their own. However, this echo effect isn't expected to last. The trend continues to be toward smaller families with fewer children. And the baby boomers are growing older—most of them have already reached middle age.

Not surprisingly, most of the workers in this industry have education-related occupations
Figure 32

The baby boom, bust and echo has had a big effect on the education industry. When the population was young and growing, and there were a lot of children, the need for teachers increased. New schools were built, more teachers were hired, and universities began to train more people to be teachers. Teaching seemed like a pretty safe career choice.

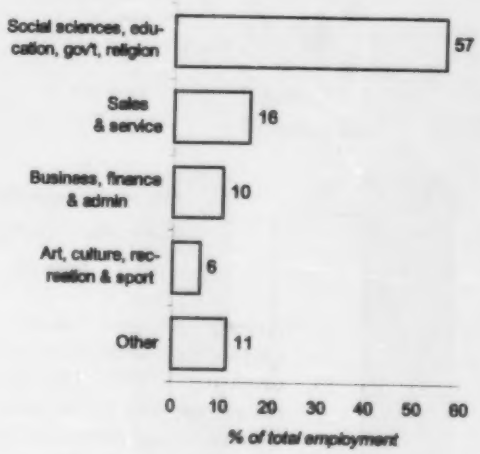
During the baby bust, the demand for teachers fell at the same time that the work force of available teachers was expanding. That's one of the reasons why it was so hard for new teachers to find work. The baby echo has only partly reversed this effect.

Of course, the education industry includes a lot of workers who aren't teachers in schools or post-secondary institutions. Changes in the size and age structure of the population may also have affected workers in other parts of the industry, such as those giving music or dance lessons. But others are less dependent on the age of the population. Museum curators, archivists, and librarians, for example, provide services to people of all ages.

What are the most common occupations?

More than half (57%) of the people working in this industry have jobs in education-related occupations. Most (23%) are kindergarten or elementary school teachers. Another 14% teach at secondary schools, while 12% are college instructors or university professors.

The 16% of the industry's work force that's employed in sales and service occupations mainly work as teacher's assistants, or in janitorial and related services. Ten percent of the people who work in this industry are in business, finance and administrative occupations. Musicians, singers, librarians and archivists account for a large number of the 6% of jobs that are in arts and culture related occupations. The remaining 11% of the people with jobs in this industry are in various other types of occupations.



Source: COPS estimate (1998)

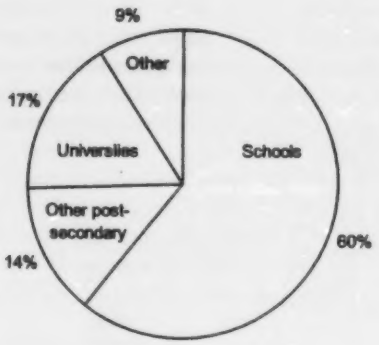
Figure 32

The skills required of teachers are evolving with changes in technology and in the fabric of society. A good example of this is the growing demand for people who can teach English as a second language. The need for these workers has arisen partly as a result of increased immigration into the province from non-English speaking countries, but also in response to a growing number of people who travel to BC from Asia in order to take English language courses.

How many people work in education, and how much do they earn?

The education services industry employed 123,900 British Columbians in 1999. Most of them worked at primary and secondary schools. Seventeen percent had jobs at universities, while 14% worked at other post-secondary institutions. Nine percent of the people with jobs in the industry worked at libraries, museums or in private educational facilities.

Schools employ six out of every ten people working in this industry
Figure 33



Total employment in 1999: 123,900

Source: Labour Force Survey/COPS

Figure 33

Average earnings in this industry were $702 for a typical workweek of 34 hours (for hourly-paid employees) in 1999. This was 12% higher than the average wage for all workers in BC. People who worked at universities put in the longest hours (an average of 37 per week), but were paid less than others in the industry, receiving $632 weekly. Those employed by schools typically put in 33 hours a week, and were paid $760 for their work.

What are the characteristics of the work force?

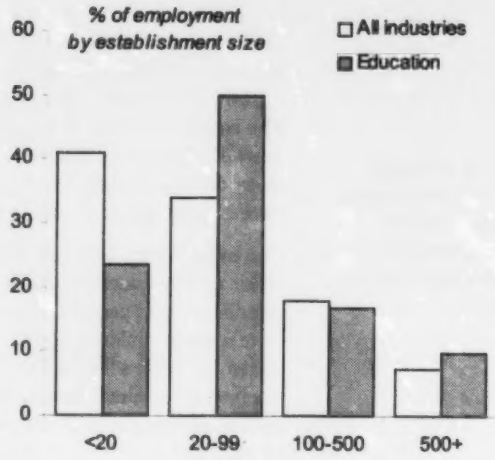
About a quarter of the people who work in the education industry have part-time jobs, meaning that they spend less than 30 hours a week at work. The industry-wide average is 20%.

More women than men work in this industry. Just under 40% of the people who are employed in education are men, even though they make up 55% of the total work force.

People who work in this industry are less likely to find themselves unemployed than are other British Columbians. Between 1990 and 1998, the jobless rate in education averaged just under 4%, which was less than half the 9% average for the province as a whole.

Self-employment is relatively rare: only 5% of the people who work in the industry are self-employed. However, about a third of the people with jobs in non-institutional education are their own bosses, as are a significant number of people who work for museums and archives, or in post-secondary institutions other than universities.

Most of the jobs are in mid-sized institutions
Figure 34



Source: Labour Force Survey (1997)
Excludes self-employed

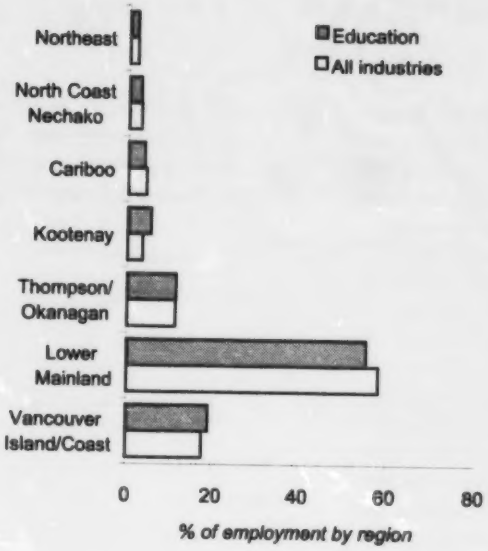
Figure 34

Half of the people with jobs in this industry are employed at mid-sized establishments, where there are between 20 and 99 employees. Nearly a quarter work in small establishments with fewer than 20 workers. At the other end of the spectrum, one in ten people working in this industry is employed at a large institution, where there are at least 500 people on staff.

Where are the jobs located?

Despite being home to BC's two biggest public universities, the Lower Mainland accounts for a slightly lower-than-average share of total employment in this industry, with 56% of the jobs.

Nineteen percent of the people who work in this industry are located in the Vancouver Island/Coast region
Figure 35



Source: Labour Force Survey (1997)

Figure 35

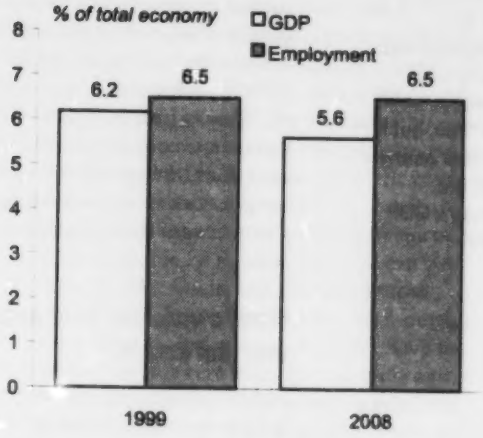
What's the outlook to 2008?

As long as people have children or want to learn new skills, there will be a demand for educators. Although that demand is not greatly affected by economic conditions, changes in the composition and size of the population over time can have a significant impact on the need for workers in this sector.

Employment in education is forecast to increase at the same rate as the number of jobs overall during the next few years, maintaining its share at 6.5%. However, it's forecast that GDP growth won't be as strong as in other industries, and the education's share of total GDP is expected to fall 0.6 percentage points to 5.6%.

Because education is an industry where the value of its output is largely determined by the amount of money spent on wages and salaries, this suggests that wage growth in the industry isn't expected to keep up with job growth. That doesn't necessarily mean that people working in education won't see the same salary increases as those in other industries. This could occur as a result of a continued shift to more part-time work in the industry.

Employment in education is expected to maintain its share of the provincial total, but GDP won't grow as fast as in other industries
Figure 36



Source: Statistics Canada/COPS forecast

Figure 36

Finance, insurance and real estate

The industry's share of employment has fallen by one percentage point since 1984, but it generates nearly a fifth of the province's GDP
Figure 37

If you're like a lot of people, when the finance industry is mentioned, you form a mental image of a yuppie wearing horn-rimmed glasses, red suspenders and a pinstriped suit, poring over reams of computer printout in an executive suite. Or you might think of a trader on the floor, rushing to put in one last bid before the stock exchange closes for the day. Those mental images might characterize some of the people who work in this industry, but most workers in finance, insurance and real estate (FIRE) sector don't resemble that stereotype at all. They're people like the teller at your bank or credit union, the real estate agent who lives next door, the person who sells you insurance for your car, or the clerk at the rental agency that manages the apartment building where you live.

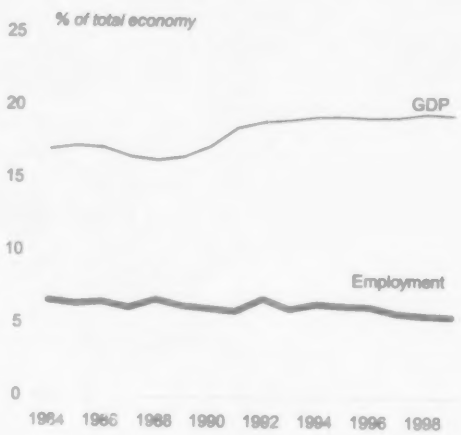
What's included in finance, insurance and real estate?

FIRE is an important industry in BC. Although it doesn't employ as many people as some other industries in the province do, its contribution to British Columbia's gross domestic product is significant. In fact, it's one of the biggest industries in the province, based on its share of GDP.

So what is included in this industry? All types of banks and banking institutions, from the Bank of Canada and the big five chartered banks to your local credit union are part of FIRE. Consumer loan and mortgage companies, investment companies, stock and commodity exchanges, and insurance underwriters are also part of the financial component of this industry. Companies that manage or operate buildings–from apartments to office towers and shopping malls–and real estate and insurance agents are also included in the industry.

What's happened since 1984?

During the last fifteen years, the industry's share of total employment has fallen, meaning that the number of jobs in FIRE hasn't grown as much as overall employment has. Despite this, the industry's share of total GDP has risen quite remarkably, climbing nearly 2.5 percentage points, from 17% to more than 19% of the total economy. The industry's share of total employment dropped from nearly 7% to just under 6% during this period.



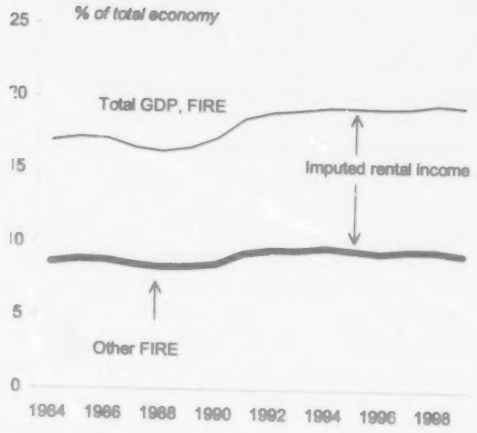
Source: Statistics Canada

Figure 37

How can 6% of the workers produce 19% of the province's total GDP?

At first glance, this huge discrepancy between the industry's share of employment and its contribution to GDP probably seems puzzling. FIRE isn't like utilities, where a huge investment in capital equipment such as dams helps explain the gap between employment and GDP. Are workers in FIRE so much more productive than other workers are? And why is the size of the GDP-employment gap growing? Has there been an increase in the already high productivity of labour in this industry? That may be the case, but it's only part of the explanation.

About half of the industry's GDP represents an estimate of the imputed rental income on owner occupied housing
Figure 38



Source: Statistics Canada

Figure 38

To understand what's happening in this industry, it's necessary to take a look at how GDP is measured. When statisticians calculate overall GDP, they include an estimate of what they call **imputed rental income** on owner occupied housing. Most homeowners choose to forego potential rental income by living in their own homes. If you didn't include an estimate of this foregone income in GDP, and people started renting out their residences instead of living in them, the economy would appear to be growing simply because consumer behaviour had changed.

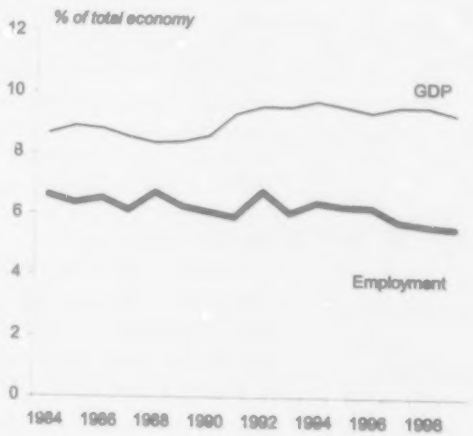
So, in the world of economic accountants, homeowners are viewed as businesses who are in the rental business, whether they're implicitly renting to themselves or explicitly renting to others. That's why imputed rental income is included in the FIRE industry. And it's big: it accounts for about 10% of BC's total GDP. About two-thirds of the increase in the FIRE industry's share of total GDP during the period from 1984 to 1999 was due to an increase in the imputed rental income estimate.

Although a tenth of BC's GDP is attributable to this estimate, it doesn't have any effect on employment, for obvious reasons. Home-ownership is treated as if it were an owner-operated business with no employees.

Productivity in the industry has increased quite significantly since 1984 as the industry's use of computers and bank machines has reduced the demand for front-line workers

The finance industry includes both banking and investment activities. Most people would view the investment industry as being quite volatile, with employment and earnings prospects rising and falling with the overall state of the economy. But a career in banking has traditionally been thought of as a fairly secure one. After all, Canada's banks have been on the scene for decades, and probably will be around for decades into the future. However, perhaps more than in some other industries, banking has been revolutionized by new technologies. You just need to walk into your neighbourhood bank, credit union or trust company to see one of the biggest developments in recent years: the automated teller machine (ATM). A lot of people use them: they're quick, convenient, and often available 24 hours a day. You can pay bills, transfer funds, and get cash almost anywhere in the country—even from outside the country—and you usually don't have to wait in line for very long. Fifteen years ago, that wasn't true: bank machines were a relatively new innovation, and most people didn't use them.

Even when the imputed rental component is excluded, the gap between GDP and employment remains quite large
Figure 39



Source: Statistics Canada

Figure 39

Technology has affected other aspects of banking as well. For instance, many large corporations use the direct deposit method to pay their employees; something that wouldn't have been possible without the advent of the computer.

The use of electronic banking services is becoming quite common. This means that a growing number of consumers and businesses can do most of their banking, including managing their accounts as well as their investments, using computers in their homes or offices. What's more, a lot of people now use debit or credit cards to pay for purchases instead of cash. As a result, even bank machines aren't needed for as many transactions as they once were. People who don't use a lot of cash can quite easily limit the number of visits they make to a bank branch or ATM.

The banking and investment industries aren't doing less business, but they've changed the way transactions are handled. Fewer of them are being done by tellers or investment dealers working in a bank branch or for an investment company. That's one of the reasons why banks can be making record profits, but are still closing small branch offices in some areas. They're not being used as much as they once were.

What does all this mean for the people employed in the finance industry? Some of the jobs they used to do are now being done by machines. It's what the customer wants, but it doesn't improve their job security. This doesn't mean that jobs in banking are going to disappear, but it does mean that they will probably change. For example, a bank teller might be expected to have different skills than in the past. Instead of just handling cash transactions with customers, workers might be expected to learn all about the range of financial products offered by a bank and to present various options to their customers. As in so many other sectors of the economy, the types of skills employers are looking for are changing, and skills that were necessary in the past may no longer improve your chances of finding employment in this industry.

Despite the changes brought on by new technologies, the banking industry tends to be stable. The need for funds may change with economic conditions, but many businesses in this sector are large enough to be able to insulate themselves against the effects of economic contractions. However, banking is only one part of FIRE; other industries, like insurance and real estate are also an important part of this sector.

While banks and trust companies tend to be large corporations with hundreds of employees, insurance companies can range from small family-run businesses to large corporations which operate all over the world. The insurance industry can be affected by factors like increases in accidents, or large awards granted by the courts but, like the banking industry, it's not as vulnerable to changes in the economy as some industries can be.

The real estate component of this industry is greatly affected by ups and downs in the economy. BC's recent housing market slump has taken its toll

The real estate industry is quite different in character from finance and insurance. It includes both small privately-owned operations and large national firms. Unlike finance and insurance companies, real estate companies are very sensitive to changes in the state of the economy.

The real estate industry is what is called a cyclical industry: when times are good, people working in this industry can do very well; but during economic downturns, they are very quickly affected. If you are considering a career in real estate, you have to be prepared for both good and bad times.

Consider a real estate agent, for example. Many are self-employed, and even those who work for others usually earn most of their income from commissions. If they sell a house, they get some money, but if they don't, they're out of luck. House prices in BC's two largest cities, Vancouver and Victoria, are among the highest in the country. That means that a real estate agent can earn a healthy commission on the sale of a house. The first half of the 1990s were boom years for people working in real estate. However, higher house prices also mean that not everyone can afford to buy a home, and when the cost of borrowing money increases some people are priced right out of the market. The province's real estate market went into a slump during the last few years of the 1990s, and it has not yet fully recovered. People are less likely to buy homes when they are afraid of losing their jobs, and the slowdown in the economy had a big effect on consumer confidence.

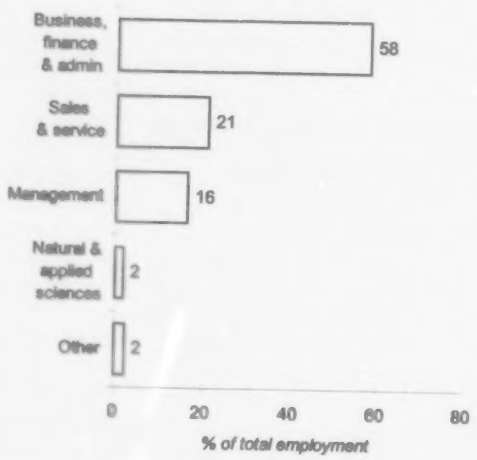
You can see from all of this that FIRE is a very diverse industry. If you work in the finance industry, you probably will have a salaried

"9-to-5" type job. If you're involved in real estate, your hours are more likely to be unpredictable. You'll probably have to work on weekends and evenings, and how much you earn will depend not only on your own efforts, but will be very significantly influenced by other factors over which you may have no control.

What are the most common occupations?

Six out of ten (58%) people working in FIRE are employed in business, finance and administrative occupations. Twelve percent of all employees in the industry work as tellers and in financial services, while just under 6% are property administrators. Clerks, investment dealers, loan officers and secretaries are just a few of the other types of occupations represented in this group.

Six in ten people working in this industry are in business, finance and administrative occupations
Figure 40



Source: COPS estimate (1998)

Figure 40

Most of the people in this industry work for financial institutions or insurance and real estate agencies
Figure 41

One in five (21%) people with jobs in the industry work in sales or service occupations. Most (11%) are real estate agents or insurance agents and brokers (6%).

Management occupations account for 16% of the work force, with the remaining 4% working in various different types of jobs.

How many people work in FIRE, and how much do they earn?

Finance, insurance and real estate employed 106,300 people in 1999, with roughly equal numbers working in the finance and real estate components of the industry. Insurance carriers had about 17,000 people on their payrolls.

Average earnings in this industry were nearly a fifth higher than for the province as a whole, at $746 weekly in 1999. Hourly-paid workers in the industry spent an average of 28 hours at work each week. Weekly earnings in finance and insurance ($793) were somewhat higher than on the real estate and insurance agency side, where they averaged $712.

Total employment in 1999: 106,300

Source: Labour Force Survey/COPS

Figure 41

What are the characteristics of the work force?

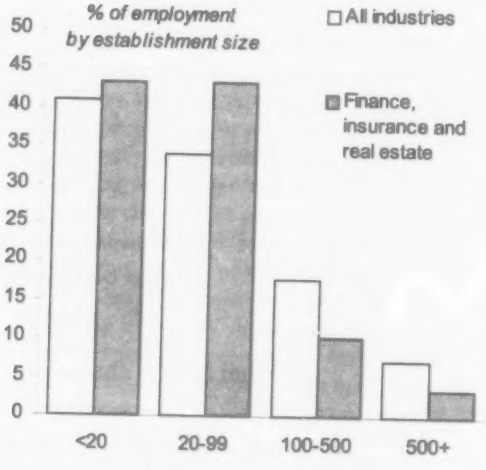
Most (80%) of the people who work in FIRE are employed full-time. That's the same percentage as in the economy as a whole. More women than men work in the industry. Women make up 60% of its work force, but there are distinct differences in the male-female split between the finance and real estate components. In finance and insurance, 70% of the workers are female. On the real estate side, there are as many male as female workers.

Unemployment rates in the industry are generally low. Between 1990 and 1998, the average unemployment rate in FIRE was 3%, about a third of the average for all industries.

Self-employment has increased significantly in this industry during the 1990s. At the beginning of the decade, one in ten workers in the industry was self-employed. The share had doubled to more than 20% by the late 1990s. People who manage buildings, work as investment or other financial intermediaries, or work as real estate and insurance agents or for consumer financing companies are most likely to be self-employed. Self-employment is very rare in banking and insurance underwriting.

Most of the people who work in the FIRE industry are employed at small (<20 workers) or mid-size (20-99 workers) establishments. This includes people who work for branches of big banks and/or insurance companies, as an establishment is a place of work and not a company. Unless you work for a head or regional office of a financial institution—even if it's one of the big five banks—it's unlikely that you'll have more than 100 co-workers at your job site.

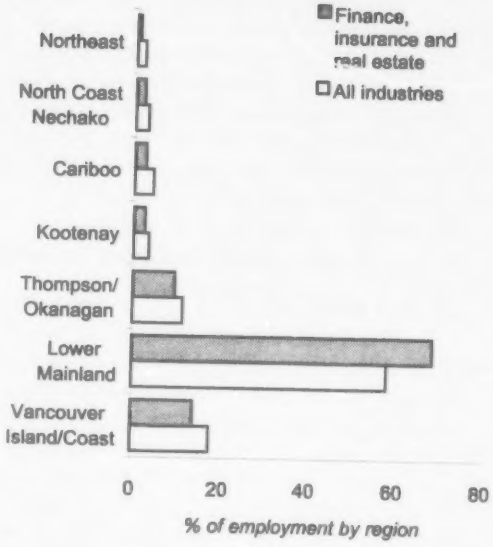
Almost 90% of the workers in this industry are employed in small and mid-size establishments
Figure 42



Source: Labour Force Survey (1997)

Figure 42

Two-thirds of the jobs in this industry are located in the Lower Mainland
Figure 43



Source: Labour Force Survey (1997)

Figure 43

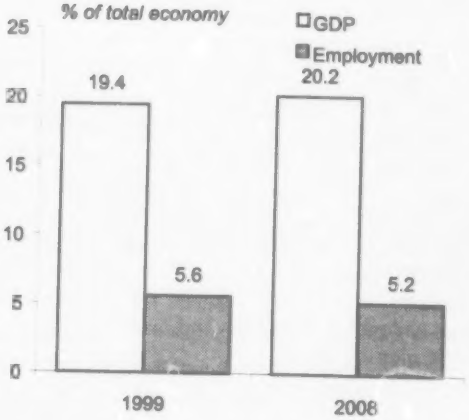
Where are the jobs located?

Vancouver is the financial capital of the province, and that's reflected in the location of the jobs in this industry. More than two-thirds of the people who work in FIRE are located in the Lower Mainland.

What's the outlook to 2008?

The finance, insurance and real estate industry has undergone considerable change in the last few decades, and will likely continue to evolve. Employment growth in FIRE is expected to lag behind the rest of the economy during the next few years. However, it's forecast that the industry's share of GDP will continue to increase, rising to 20.2% by 2008.

The gap between GDP and employment in FIRE is expected to continue to grow
Figure 44



Source: Statistics Canada/COPS forecast

Figure 44

Government services

The industry's share of GDP and employment has been falling
Figure 45

The types of jobs available in government services are wide-ranging. United Nations peacekeepers, diplomats, Supreme Court judges, firefighters, police officers, highway workers, and the clerk at your local Motor Vehicles Branch are all civil servants who work for one of the three levels of government. Some jobs, like the Supreme Court judge's, can only be obtained after many years of education and experience; others, like the firefighter's or peacekeeper's, demand physical stamina and a high level of physical fitness.

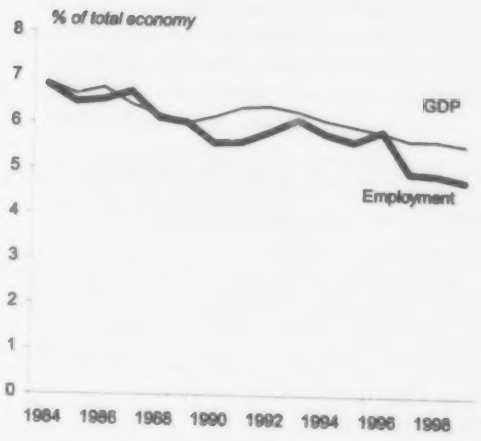
Employment in the civil service is usually not subject to wide variations related to the business cycle. However, political or philosophical differences between governments can, and often do, have an effect on the number of people employed in the civil service and the types of jobs that they have. Some governments favour allowing the private sector to provide services, while other governments choose to provide them directly.

What's included in government services?

Employment in the civil service is pretty well evenly divided among the three levels of government. However, because different levels of government have different types of responsibilities, the type of jobs available in the civil service varies considerably among governments. Local governments, for example, are more likely to hire construction workers than other levels of government, because municipalities are responsible for maintaining streets, bridges and other public works in cities and towns. Defence and foreign affairs are the sole domain of the federal government, while all three levels of government use the services of administrators.

What's happened since 1984?

Across the country, the 1990s were a period of downsizing in the government services industry, and the evidence of this can be seen in Figure 45. The industry's share of total employment has fallen quite substantially since 1984, when nearly 7% of the people with jobs worked for federal, provincial or local government administrations. By 1999, the share had fallen to just under 5%.



Source: Statistics Canada

Figure 45

The actual number of people on the government payroll hasn't fallen. In fact, there were 7% more people working in this industry at the end of the 1990s than there had been in 1984. The drop in the industry's share of total employment comes as a result of slower than average job growth. By comparison, the total number of people with jobs in BC increased more than 50% between 1984 and 1999.

Like health care and education, the demand for many of the services (such as the administration of the social safety net or the medicare system) produced by this industry is related to the size of the population. BC's population has increased quite substantially, growing nearly 40% since 1984.

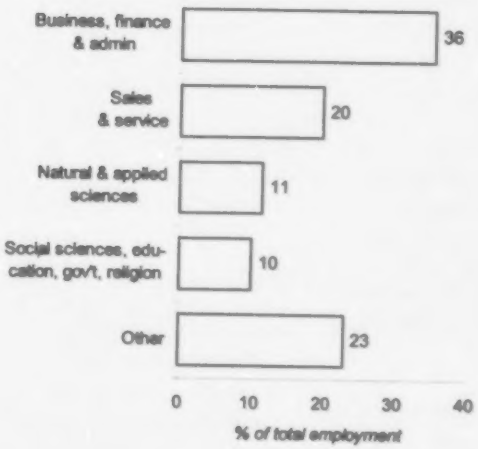
The downsizing in this industry has occurred by restricting employment growth to less than what it would have been if the ratio of workers to population had been kept constant. This may well have occurred as a result of improvements in the productivity of the existing work force. In addition, some types of jobs, such as highway maintenance, are now being done by private sector contractors instead of government employees.

Figure 45 also shows that the relationship between employment and GDP in this sector is very strong. Part of the reason for this is that it is difficult to measure the product of the public administration sector. The government usually

doesn't sell goods or services. Instead, it exists to provide services to the public, and there is no easy way to measure the value of those services. That's why statisticians calculate GDP based largely on the cost of labour in the civil service. Because labour income is such a big component of GDP, you will almost always see employment and GDP changing at about the same rate.

What are the most common occupations?

More than a third of all civil servants are employed in business, finance and administrative occupations
Figure 46



Source: COPS estimate (1998)

Figure 46

The most common occupations within the government services industry are in business, finance and administration. Just over a third (36%) of the people who work for federal, provincial and local governments are in this occupational group. The majority of them are clerical workers, secretaries, immigration and revenue officers, or in similar types of jobs.

Most of the 20% of the work force with jobs in sales and service occupations are police officers (7%), firefighters (4%) or correctional officers (3%).

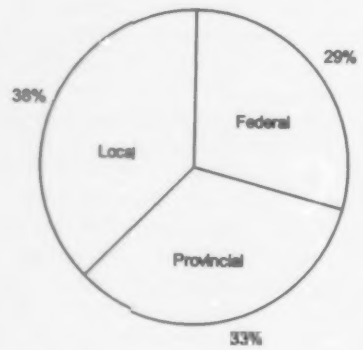
Eleven percent of the workers are in natural and applied sciences, and 10%, in the social sciences and related occupations. The remaining 23% of the work force is comprised largely of people in managerial positions (9%), tradespeople and transportation equipment operators (7%) and people working in occupations specific to primary industries. The latter are mainly landscapers and forestry workers.

How many people work in government services and how much do they earn?

Federal, provincial and local governments in the province employed 90,900 people in 1999. Local government was the biggest employer in the sector, with 34,200 workers on its payroll. The provincial (30,400) and federal (26,400) governments had slightly fewer people working in various ministries, departments and agencies.

Public sector workers were generally well paid, receiving an average of $797 weekly, which was 28% higher than the all-industry average. The standard workweek for hourly-paid employees was 35 hours, which was also somewhat longer than the provincial average workweek of 31 hours.

Local government is the biggest employer in this industry
Figure 47



Total employment in 1999: 90,900

Source: Labour Force Survey/COPS

Figure 47

Federal ($821) and provincial ($822) government employees received relatively similar pay packets, on average. Those working for local governments typically earned $753 for a week's work.

What are the characteristics of the work force?

More than 90% of the people who work in government services have full-time jobs. That's well above the average for the economy as a whole (80%) and higher than in any other service industry. The male-female composition

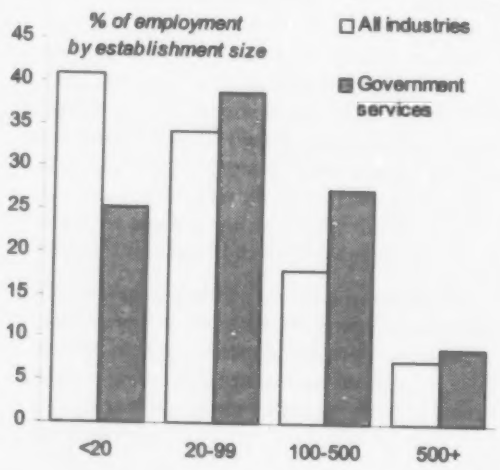
of the civil service is the same as in the work force in general: 45% of the people who work in the industry are female and 55% are male.

People who work in government services are not very likely to experience unemployment. From 1990 to 1998, the jobless rate in government services averaged 4%, less than half the provincial rate of 9%. However, workers in the finance, insurance and real estate and health and social services industries experience even lower unemployment rates during this period.

Self-employment does not exist in this sector. By definition, all of the people who work in government services are employees of the state.

Even though both the federal and provincial government, and some of the bigger cities in the province, have a lot of employees, that doesn't mean that people with jobs in this industry will find themselves working in an office where they have lots of co-workers. One in four civil servants works in an office with fewer than 20 co-workers. Another 40% are employed at locations where they have more than 20, but fewer than 100 colleagues. However, 9% of the people in this industry work in a large establishment, with 500 or more employees.

Even though government is a big employer, a lot of the people in this industry work in fairly small offices
Figure 48

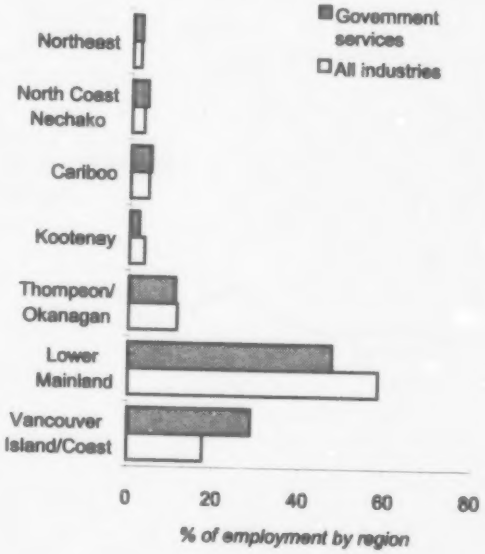


Source: Labour Force Survey (1997)

Figure 48

As Victoria is the capital city, most provincial government ministries have their main offices in the Vancouver Island/Coast region of the province, and this is reflected in the distribution of the work force in the government services industry. About 29% of the people who work in the industry are located in this region. Its share of the total work force is just 18%.

Conversely, the Vancouver area's share of government sector workers (47%) is much lower than its share of total employment (58%). However, there are three times as many people who work for the federal, provincial or local government in the Lower Mainland than there are in Vancouver Island/Coast. Other regions of the provinces account for shares of total employment in this industry that are very similar to their share of the province's work force.



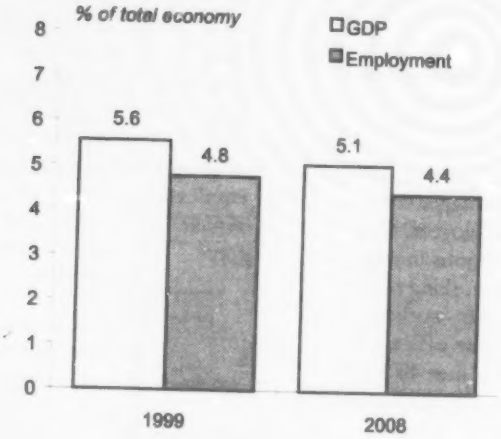
Source: Labour Force Survey (1997)

Figure 49

What's the outlook to 2008?

Governments are expected to continue to exercise restraint during the next few years, and forecasters anticipate that the government services industry's share of total GDP and employment will continue to fall. By 2008, just over 4% of the work force is forecast to be employed in this industry, and it's expected to account for about 5% of the province's GDP.

GDP and employment in government services aren't expected to grow as fast as in the rest of the economy
Figure 50



Source: Statistics Canada/COPS forecast

Figure 50

Transportation and storage

Although its share of total employment is smaller than for some other industries, the role of this industry in the province's economy can't be overstated. It provides a vitally important service on which a lot of businesses and individuals depend. Firms transport goods to their customers by air, rail, road, or sea. They store their merchandise or supplies in warehouses. Consumers use transportation services to travel to work or school, and when they go on vacation.

Canada's history—and BC's place in it—is closely linked to the development of the transportation industry. Take the railroad, for example. If the Canadian Pacific Railroad (CPR) hadn't been built, British Columbia might not even have been part of this country. The Canadian government's promise to build a transcontinental railroad was one of the main reasons why the province joined Confederation in 1871. The building of the railroad, the opening of the Panama Canal, the invention of the airplane, and the development of better highway systems have all been critically important to BC's economic development.

The fact that most large cities are located near a major port or on an important trade route is no accident. Airports, port facilities, rail lines and highways all contribute to the growth of cities. They also lead to the development of related industries that provide goods and services used by these facilities, or which depend on good access to shipping routes. Vancouver's location as a major port, a terminus for grain shipments from the prairies, and a hub city for air traffic have all contributed to the city's growth.

The storage industry goes hand-in-hand with transportation. For example, grain elevators are needed to store wheat for shipment overseas, while warehousing services are used by companies transporting their goods to or from the province.

What's included in transportation and storage?

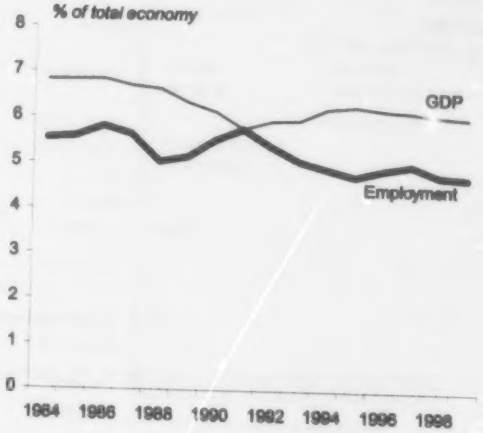
This industry includes air, rail, water and truck transportation services, as well as public passenger transit, other types of transportation such as taxicabs and limousines, and related services such as maintenance, cargo handling, pipeline transport, storage and warehousing.

What's happened since 1984?

Between 1984 and 1999, the industry's share of total employment fell from nearly 6% to just under 5%. During the same period, its contribution to total GDP fell nearly as much, slipping to just over 6%.

Some of the industries within this group have had a fairly bumpy ride during the last few years. While truck transportation has shown strong growth, more than doubling its GDP over the fifteen-year period, other industries haven't fared as well. The air transportation industry shrank 10% between 1984 and 1999, and other industries such as public passenger, urban transit and water transportation showed below-average growth, relative to the rest of the transportation and storage industry and to the economy as a whole.

GDP and employment in the transportation and storage industry hasn't grown as fast as in the rest of the economy
Figure 51



Source: Statistics Canada

Figure 51

The decline in the air transportation industry's GDP didn't translate into a similar drop in employment, suggesting that this industry may have adapted to fierce competition by working its employees for shorter hours rather than laying them off. However, employment in other industries such as rail and water

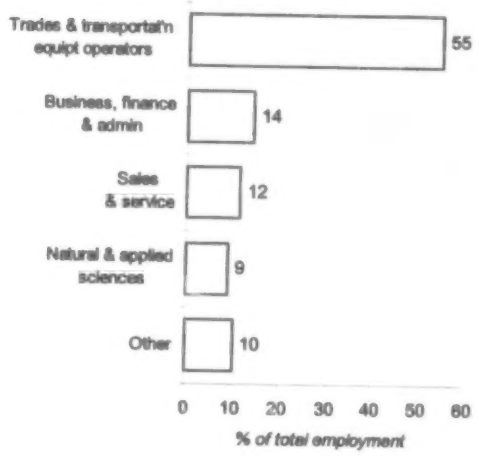
transportation saw little or no growth during the period from 1984 to 1999. Some of the industries that have recorded the smallest increases in GDP have at the same time expanded their employment more than others in this group. A move to more part-time employment is the most likely explanation for this curious phenomenon.

Because there is so much variation within the transportation and storage industry group, the overall performance of the industry has been quite volatile during the last fifteen years.

What are the most common occupations?

Not surprisingly, trades and transportation equipment operators account for the lion's share of the work force in this industry, with 55% of the workers employed in this occupational group. Truck (15%) and bus (6%) drivers together account for more than a fifth of total employment in the industry.

More than half of the people working in this industry are transportation equipment operators or tradespeople
Figure 52



Source: COPS estimate (1998)

Figure 52

Half of the people working in the industry are employed by trucking or air transport companies
Figure 53

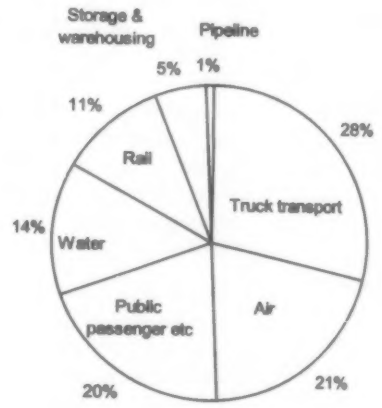
Fourteen percent of the people working in this industry are in business, financial and administrative occupations, while 12% are in sales and services. Natural and applied science occupations, which include air pilots, deck officers on vessels, and air traffic controllers, account for 9% of the jobs, with the remaining 10% being mainly people in managerial (8%) occupations.

How many people work in transportation and storage, and how much do they earn?

In 1999, there were 90,100 people working in this industry. Most of the industries within this group are involved in transporting either freight or passengers. Trucking is the biggest employer, with 28% of the industry's workers. Air transportation (both passenger and freight) employs about a fifth of the workers, with a similar share working for urban transit systems, intercity bus lines, taxis, and other types of road transportation. Another 11% work for the rail industry.

Storage and warehousing (5%) and pipeline transportation (1%) employ a relatively small percentage of the people who work in this industry.

Average earnings in the transportation and storage industry were generally quite high, at $835 weekly, about a third more than the provincial average for all industries. Workers in all parts of the industry generally earn higher-than-average wages. The top wage-earners work in rail ($965), water ($871) and public passenger ($870) transportation. The average workweek for hourly paid employees in the transportation and storage industry was 36 hours in 1999.



Total employment in 1999: 90,100

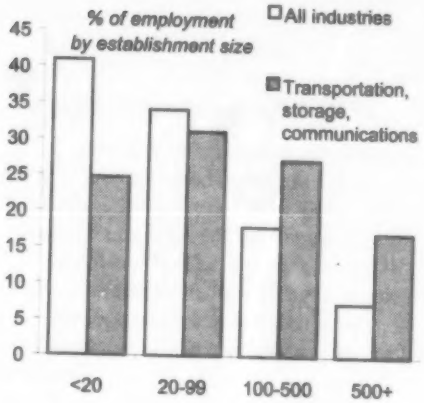
Source: Labour Force Survey/COPS

Figure 53

What are the characteristics of the work force?

Full-time employment is more common in transportation and storage than in most other service industries. About 90% of the people who work in this industry hold full-jobs, meaning that they spend at least 30 hours a week at work.

Establishments in this industry tend to be bigger than average. That's largely a reflection of the amount of investment that's required to establish and maintain those services
Figure 54



Source: Labour Force Survey (1997)

Figure 54

The industry is male-dominated. Eighty percent of the people who work in the transportation and storage industry are men. Air transportation is the only industry within this group where women account for a substantial share of the work force (40% of employees in the air transportation industry are female). About a quarter of the workers in water transportation, and one in five in the bus and transit industry are female. In the rest of the industry, the number of female workers typically ranges between 10% and 15% of total employment.

The unemployment rate in the transportation and storage industry averaged just under 6% during the period from 1990 to 1998. The provincial unemployment rate (for all industries) was 9% during this period.

One in nine workers in transportation and storage is self-employed. Self-employment isn't a big factor in most of the industry, but more than a quarter of the truckers, taxi and other drivers are their own bosses.

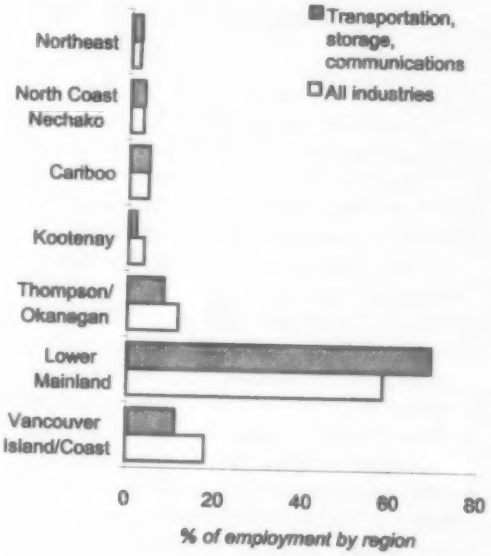
We don't have data on employment by establishment size for transportation and storage separate from communications.

However, as Figure 54 illustrates, many of the establishments in this industry group are large. That's because an awful lot of money has to be invested in the infrastructure and equipment used by air, rail, water and public passenger transportation systems. Once those are put in place, it takes a lot of workers (and customers) to operate a viable service. Seventeen percent of the people in transportation, storage and communications work in establishments where there are at least 500 employees. Another 27% are employed at locations where there are from 100-500 workers.

Where are the jobs located?

Vancouver is the hub of the province's transportation infrastructure system. It's also the location of Canada's busiest port, the western terminus for shipments of grain and other resource commodities produced in BC and in the prairies, and the first available stopping point for flights to Canada from the Pacific Rim. All of these reasons, plus the fact that the population of the Lower Mainland now exceeds two million people, help explain why just under 70% of the jobs in transportation, storage and communications are located in the Vancouver area.

Seven out of ten jobs in BC's transportation, storage and communications industry are in the Lower Mainland
Figure 55



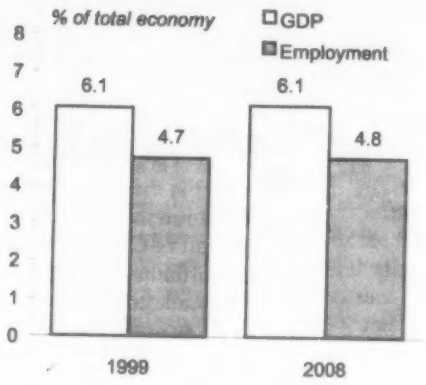
Source: Labour Force Survey (1997)

Figure 55

What's the outlook to 2008?

Overall, GDP and employment in this industry are expected to grow at the same rate as the rest of the economy. Its share of GDP is forecast to rise slightly to just under 5% by 2008, while transportation and storage is forecast to continue to employ just over 6% of the work force.

GDP and employment in the industry are forecast to keep pace with the rest of the economy during the next few years
Figure 56



Source: Statistics Canada/COPS forecast

Figure 56

Communications

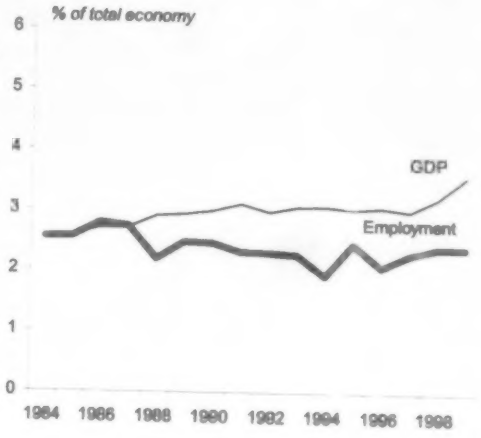
What's included in the communications industry?

This industry includes radio and TV broadcasting, cable and telephone companies, and postal and courier services. All of them have been greatly affected by changes in technology and in the regulatory climate under which the industry operates.

What's happened since 1984?

The communications industry's share of total GDP has increased from less than 3% to nearly 4% since 1984. At the same time, the industry's share of employment has remained quite stable, at just over 2%. The fact that the GDP-employment gap is increasing is largely due to technological advances which have revolutionized this industry during the last fifteen years.

The communications industry has displayed strong GDP growth during the last fifteen years, but that hasn't translated into a similar number of new jobs
Figure 57



Source: Statistics Canada

Figure 57

Technology has played a big role in the development of the communications industry

The communications industry is one of many that have been greatly affected by technological advances during the last two decades. The services it provides have expanded greatly in scope and are becoming more important to consumers as well as businesses. The Internet and wireless communications have played a big role in the growth and evolution of this industry during the last decade.

At the beginning of the 1990s, the Internet was just beginning to be a widely-used tool for businesses and consumers. Most people hadn't even heard of the World Wide Web or modems, cell phones weren't very common, and you had to buy long distance services from your local telephone company. Things have changed a lot since then.

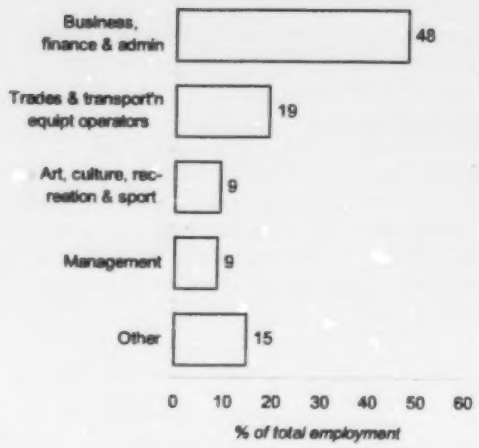
About a third of BC households now have Internet access, whether it's through a phone line or cable company. Cell phones are becoming more and more common, and deregulation has introduced competition among telephone service providers for both long-distance and local service customers.

The widespread use of email, faxes and the proliferation of courier service companies—all of which have happened since 1984—have also introduced competition into the postal service industry. This has undoubtedly helped increase the efficiency of the postal services industry.

What are the most common occupations?

Nearly half (48%) of the people working in the communications industry are in business, finance and administrative occupations. A large number of them are letter carriers, postal clerks and couriers. Delivery drivers, telecommunication installers, repair and line workers account for the bulk of the 19% of people in this industry who are in trades and transportation equipment operating occupations. The arts and culture related occupations, which employ 9% of the workers, mainly involve jobs in areas such as graphic design, producing, broadcasting and journalism. Nine percent of the people working in this industry are in managerial positions, while most of the remaining 15% are in sales and service (8%) or natural and applied sciences (6%). These are mainly engineers and computer analysts and programmers.

Business, finance and administrative occupations account for nearly half of the jobs in this industry
Figure 58



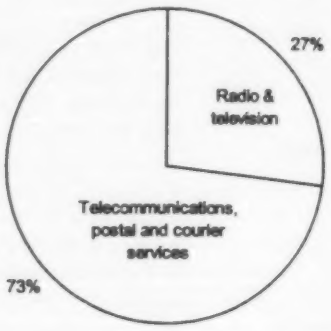
Source: COPS estimate (1998)

Figure 58

How many people work in communications and how much do they earn?

The communications industry employed 45,700 people in 1999. Average earnings in the industry were $776 a week, about a quarter more than the all-industry average for BC. Hourly-paid workers typically spent 38 hours on the job each week.

People who work for radio and TV broadcasters make up about a quarter of the work force in this industry
Figure 59



Total employment in 1999: 45,700

Source: Labour Force Survey/COPS

Figure 59

What are the characteristics of the work force?

Ninety percent of the people who are employed in the communications industry have full-time jobs. That's comparable to the average in the goods sector, but higher than in the economy as a whole, where 80% of all workers are employed full-time. Slightly less than 60% of the people who work in this industry are male.

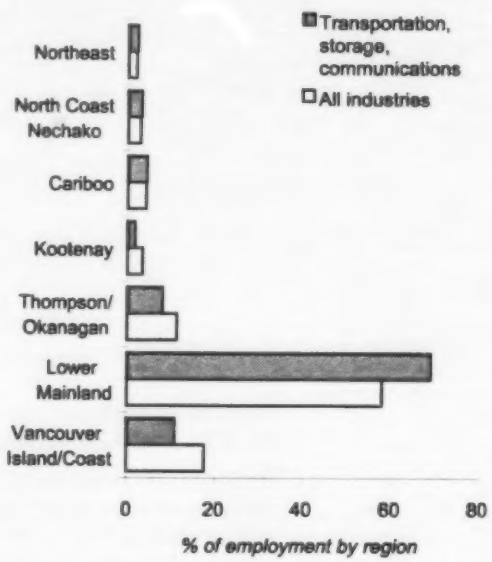
The average unemployment rate in the communications industry was quite low during the 1990s, at just under 4%, less than half the provincial average rate of 9%.

The nature of the industry, which requires a huge investment in capital infrastructure for broadcasting or providing telecommunications services, doesn't lend itself to self-employment, which is rare in communications. This is also true in the case of postal services. However, a small number of people in the industry are self-employed. Most of them are providing courier or similar types of services.

We don't have information on employment by establishment size for communications separate from transportation and storage.

Where are the jobs located?

Most of the jobs in the industry are located in the Lower Mainland
Figure 60



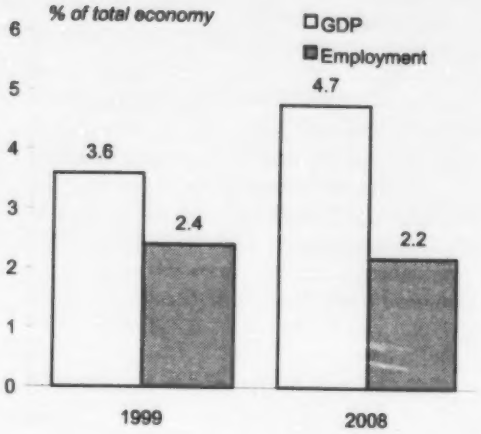
Source: Labour Force Survey (1997)

Figure 60

What's the outlook to 2008?

The communications industry is expected to be one of the growth engines in the BC economy during the next few years. By 2008, forecasters predict that 4.7% of the economy's gross domestic product will originate in this industry, an increase of more than one percentage point compared to 1999. However, employment isn't expected to grow as much as in the rest of the economy, and the industry's share is expected to dip slightly, falling to 2.2% of the total. This suggests that continued productivity gains are likely to provide much of the impetus for the industry's future growth.

By 2008, it's expected that nearly 5% of BC's GDP will originate in this sector
Figure 61



Source: Statistics Canada/COPS forecast

Figure 61

6. The new economy

What is the "new economy"?

Tourism, high-tech and the film industry are part of what's often called the new economy. Trends in these sectors are followed with great interest by the media and other observers of the economy. Many see them as future, or even current, growth engines in the economy. That view may be somewhat optimistic, as all three sectors remain relatively small compared to the rest of the economy. However, even though they're small, some of the fastest-growing industries in the economy are in this group. In this chapter, we'll take a look at what's happening in the tourism and high tech sectors.

We'll also briefly examine some other industries that have exhibited particularly strong growth during the last fifteen years. Finally, we'll look at another trend that's developing in the province's labour market: the rapid growth in self-employment that's occurred since the 1980s.

Measuring GDP and employment in the tourism and high tech sectors

Firms in the tourism and high tech sectors don't belong to a single industry or group of industries. They produce many different types of goods and services. In the case of tourism, the element that ties them together is the clients that they serve. In the high tech sector, the common element is the degree to which the goods and services that they produce are viewed as high tech products.

GDP and employment data for these sectors aren't available from the usual sources, as they are non-standard industry groups. However, BC STATS has developed estimates for these sectors by attributing part of the output or employment of other (standard) industries to these special groupings. For example, it's estimated that about 25% of the activities of the food and beverage service industry are tourism related. Virtually all of the GDP and employment in accommodation services is also attributed to this sector. The proportions that are used are based on research that's been done by BC STATS.

How should you interpret and use this data?

Because both tourism and high tech are special groupings of industries (or parts of industries), the data for these sectors isn't independent of the GDP and employment figures we used in Chapters 4 and 5. This means that if you're comparing tourism or high tech with other industries, you need to be aware of what's been included in the definition of these special sectors. Otherwise you might end up double-counting some of the data.

Perhaps the best way to understand this is by looking at computer services, which is part of the business services industry, but is also included in the high tech sector. If you were to compare GDP in business services with high tech GDP, you'd have to keep that in mind, because both of these industry groupings contain the GDP that's attributable to computer services.

There are a couple of other factors you need to be aware of when you're using this data. BC STATS produces the tourism and high tech GDP estimates using information that's published in the fall of each year. We've included the latest GDP estimates (released in October 2000, which includes data up to the end of 1999) in our overviews of the goods and service industries in Chapters 4 and 5. However, the tourism and high tech figures have not yet been updated. Thus, the GDP figures we're presenting in this chapter are based on data released in November of 1999. That's why they only go to 1998.

Employment data from different sources

There's one more twist, and it's related to the employment figures for tourism and high tech. In the rest of this book, we've used employment data that's derived from the Labour Force Survey (LFS), a monthly survey of households that's done by Statistics Canada. There's another source of employment information (also from Statistics Canada) that's based on data supplied directly by employers. It's called the Survey of Employers, Earnings and Hours, or SEPH. SEPH data is available at a greater level of industry detail than the LFS information is. That's why we used it when we were generating our employment estimates.

However, there are some differences in the definitions that are used to produce the SEPH and LFS numbers. The most important ones are that the SEPH figures don't include workers who are:

- Self-employed;
- Have jobs in agriculture and fishing; or
- Work in private households.

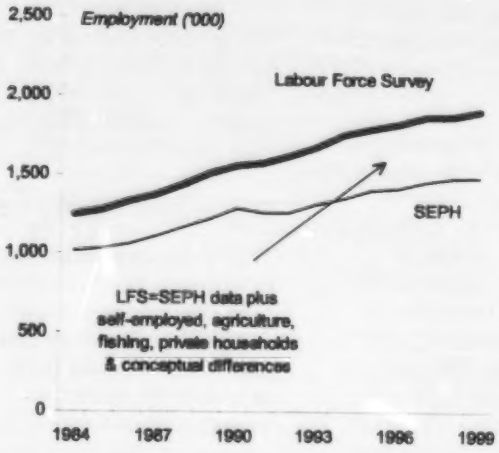
There are some other definitional differences between the two sets of data, but the three we've mentioned are probably the most significant.

This means that the employment figures that we've produced for tourism and high tech don't include any self-employed workers, so they are probably under-estimated. At the same time, when we're comparing the data for tourism or high tech to total (SEPH) employment, the all-industry total doesn't include agriculture, fishing or private

households, in addition to excluding self-employed workers. This means that the figures probably overstate the share of total employment that's attributable to tourism or high tech.

Despite these data issues, the information on tourism and high tech is useful for analyzing trends in these two high-profile sectors of the economy.

Total employment estimates from the Survey of Employers, Payrolls and Hours are about 25% lower than those from the Labour Force Survey
Figure 1



Source: Labour Force Survey & Survey of Employers, Payrolls and Hours

Figure 1

Tourism

BC has become a world-class tourist destination. Vancouver is consistently ranked among the top ten cities in the world in surveys done by travel magazines. The most recent example of this is a poll in the November 2000 issue of *Condé Nast Traveler* that placed Vancouver ninth among the world's best cities. The province's location, bordered by the Rocky Mountains on the east and the Pacific Ocean on the west makes it unique within Canada. Its magnificent mountain and coastal scenery, opportunities for summer sailing, winter skiing, and other activities such as fishing or sightseeing in coastal and inland waters, all help support its substantial tourism sector. Many of the people who visit and spend money in BC come from other parts of Canada or from the States. There are also a lot of tourists from Asia who spend time in the province.

What is a tourist?

We usually think of a tourist as someone who's vacationing somewhere that's far from home. But the technical definition of a tourist is a little different. It counts anyone who travels to a place outside his or her usual environment and stays away for no more than a year. The motivation for the trip is irrelevant: the person could be traveling for business reasons, to visit family and friends, or simply for pleasure.[5] It is also not necessary for a person to stay overnight in order to be considered a tourist. Day trips (also known as excursions) are an important type of tourism. However, to be considered a tourist, you do need to travel at least 60 kilometres away from your home.

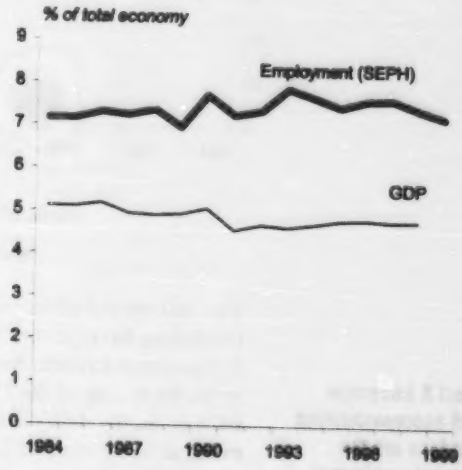
What's included in the tourism sector?

Since tourism is an activity and not a specific good or service, strictly speaking there is no such thing as a "tourism industry." Tourists make purchases from a variety of businesses, most of which also provide the same services to local residents (for example, restaurants). This creates a challenge when attempting to measure the specific impact that tourists have on particular industries. Fortunately, from studies of tourist behaviour, we have a reasonably good idea of what tourists are doing and what they are buying when they visit the province. From this information we can determine the effect that tourism has on various industries.

We've included a percentage (which varies by industry, ranging from less than 5% to nearly 100%) of the activities of the following industries in the tourism sector:

- Accommodation services
- Food and beverage services
- Transportation and storage
- Retail and wholesale trade
- Finance, insurance and real estate
- Various other service industries where there is a small tourist-related component. For example, museums are included in the education industry, so a small percentage of its activities are attributed to this sector.

What's happened in tourism since 1984?



Source: BC STATS

Figure 2

BC's tourism sector has maintained its share of GDP and employment at about the same level since 1984, although there have been some ups and downs during this period. It currently

Despite some ups and downs, the sector's share of GDP and employment has remained relatively stable
Figure 2

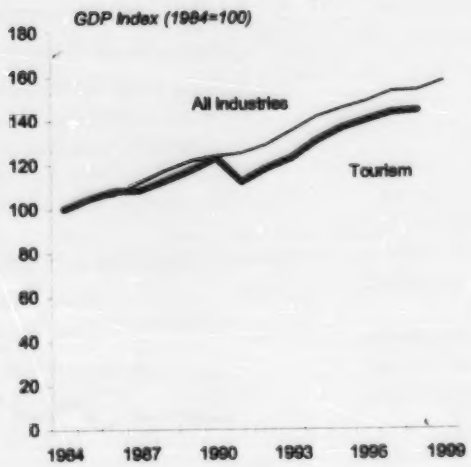
[5] The exception to this is migratory workers living away from home on a temporary basis in order to be at their place of work; they are not considered to be tourists.

accounts for 4.8% of total GDP, a share that has remained constant since 1995. The sector's contribution to BC's total GDP was $4.3 billion in 1998.

About 7% of total employment (based on SEPH data) in the province is generated by tourism activities. The sector's share of all jobs peaked at just under 8% in 1993, but has declined since then.

Tourism activities are very susceptible to changes in economic conditions. When the economy is weak, and people feel uncertain about their jobs, they're not as likely to spend money traveling. If they do go on trips, they usually travel shorter distances, and may not spend as much money in hotels, at restaurants, or on various types of amusements.

Tourism is more volatile than other industries. The sector still hasn't regained all the ground it lost in the recession of the early 1990s
Figure 3



Source: BC STATS

Figure 3

You can see the effect that overall economic conditions have on the tourism sector in Figure 3. There was a North American-wide recession at the beginning of the 1990s. Even though BC's economy didn't feel the effects of this as much as other parts of Canada and the US did, the province's tourism sector was greatly affected by the slowdown. The tourism sector's GDP fell sharply in 1991, and the sector still hasn't caught up to the rest of the economy in terms of its overall growth since 1984. The drop was largely due to the tourist-related component of the transportation industry, which was particularly hard hit in the slowdown of 1991.

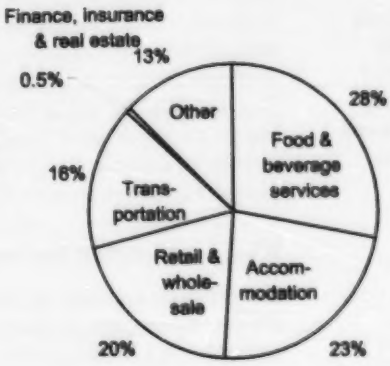
More recently, GDP growth in the tourism sector has been slowing, and employment in the sector has also begun to level off. This is probably due, at least in part, to the effects of the so-called "Asian flu" (the recession in Japan and other parts of Asia that began in 1997), which led to a decline in the number of tourists coming to BC from Asia. The effect wasn't as big as it might have been, as the low value of the Canadian dollar resulted in a larger influx of Americans traveling in BC. However, slower GDP growth in the province as a whole during the last two years may have curtailed some tourist activities by BC residents traveling within the province.

How many people work in tourism?

In 1999, there were 106,800 people working in British Columbia's tourism sector.

Approximately one in every 14 jobs in British Columbia is a result of tourist activity, making the tourism industry one of the largest employers in the province. Within the tourism sector, the food and beverage service and accommodation industries account for just over half of all jobs. Wholesale and retail trade is the third largest employer, followed by the transportation and communication industries.

Food & beverage and accommodation services are the biggest employers in the sector
Figure 4



Employment in 1999: 106,800

Source: BC STATS

Figure 4

Some industries are more dependent on tourism than others. Employment in the accommodation industry is almost completely driven by tourism activity and over a quarter of the jobs in the food and beverage services industries are due to tourism. Transportation, storage and communication has a significant tourism component as well (17%), while tourist-related jobs in retail and wholesale trade account for less than 8% of the total, even though retail and wholesale trade industries make up almost 20% of all direct tourism jobs.

What's the outlook for tourism?

Tourism will likely continue to grow, but will show more volatility than other industries do

Tourism is already an important sector within British Columbia's economy and this will likely continue to be the case in the future. However, more than in some industries, tourism activity is susceptible to changes in the economic climate both within and outside British Columbia. There is no doubt that the so-called "Asian flu" had a negative effect on the province's tourism sector, as did the recent slowdown in the provincial economy. If the economy here and abroad picks up speed, the performance of industries within the sector should improve, which will help ensure future growth in British Columbia's tourism sector.

High tech

High technology is seen by many as the future engine of economic growth in the province. That's hardly surprising given the tremendous advances that have occurred in this sector during the last two decades, not just in BC, but throughout the world. In the early 1980s, the sector was small, and some industries, such as computer services, were virtually non-existent. But with the advent of the PC, rapid improvements in microchip technology, and the introduction of a growing number of consumer and business goods and services that depend on microchips and other high-tech inputs, it's not hard to see why the industry has taken off.

BC isn't Silicon Valley North yet, but the high tech sector is making a growing contribution to GDP and employment in the province. What's more, the expansion of the sector has been an important factor in the continued diversification of BC's economy away from its dependence on resource extraction and processing towards other types of manufacturing activities.

What's included in the high tech sector?

It still isn't a big player in the economy, but the high tech sector is growing fast
Figure 5

The sector includes a number of industries that produce goods or services with a significant high tech component. These industries include activities ranging from the manufacture of batteries and aircraft parts, to the work that's done in medical and research laboratories.

On the manufacturing (goods-producing) side, the following industries have been identified as having a significant high tech component:

- Manufacturing of turbines & mechanical power equipment, other specialized machinery;
- Aircraft & parts, shipbuilding;
- Telecommunications equipment, computers & parts, business machines, electrical industrial equipment, and a variety of other types of related electronic products;
- Pharmaceuticals and inorganic chemicals;
- Scientific instruments, musical instruments, sound recordings, etc.

As was the case in the tourism sector, only the portion of the GDP and employment in these industries that is high-tech related has been included.

On the service side, the high tech sector includes:

- Computer and related services;
- Offices of engineers;
- Other scientific and technical services;
- Medical and health labs.[6]

What's happened in high tech since 1984?

The high tech sector's share of total GDP has increased from 1.7% to 3.0% between 1984 and 1998. Its share of total employment jumped from 2.2% to 3.5% between 1984 and 1999.

Source: BC STATS

Figure 5

High tech is still one of the smallest industry groups in BC, comparable in size to the utilities and communications industries. It's about 60% as big as tourism.

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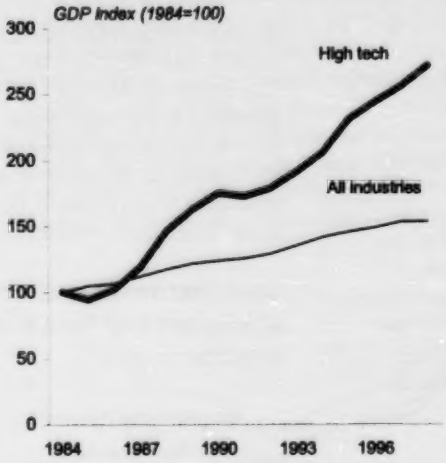
[6] More information on the methods used to derive estimates for this sector is available at www.bcstats.gov.bc.ca.

Figure 6 compares GDP growth in the high tech sector with the overall performance of the economy during the period from 1984 to 1999. As you can see, the sector's GDP nearly tripled during this period, while the economy as a whole grew by slightly less than 50%. Employment growth in the sector hasn't been quite as strong, but it has also increased much faster than in the rest of the economy.

GDP in the high tech sector has nearly tripled since 1984
Figure 6



Source: BC STATS & Statistics Canada

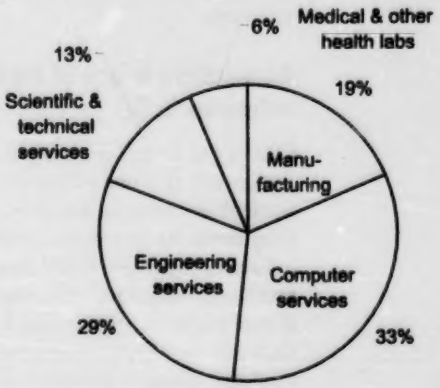
Figure 6

How many people work the high tech sector?

Nearly two-thirds of the jobs in high tech are in computer and engineering services
Figure 7

In 1999, there were 52,100 British Columbians who had jobs in high tech industries. Computer services is the biggest employer, with about a third of the work force. Engineering (29%) and technical (13%) services also account for a significant part of total employment in the sector. Of the remaining 25% of jobs, 6% are in medical and health labs and 19% are in various manufacturing industries.

The high tech sector's contribution to BC's total GDP was $2.6 billion in 1998. Within the sector, the industrial distribution of GDP was very similar to that of employment, except that a slightly higher share (25%) of the total was attributable to manufacturing activities. The share of GDP originating in medical and other health labs (3%) was about half as big as its share of total employment (6%)



Total Employment in 1999: 52,100

Source: BC STATS

Figure 7

What's the outlook for the high tech sector?

It's unlikely that the rapid growth rates that have been observed in high tech industries can continue indefinitely, but to this point, the sector's rapid growth shows no sign of abating. It's reasonable to expect that the role of high tech in BC's economy will continue to expand over the next few years.

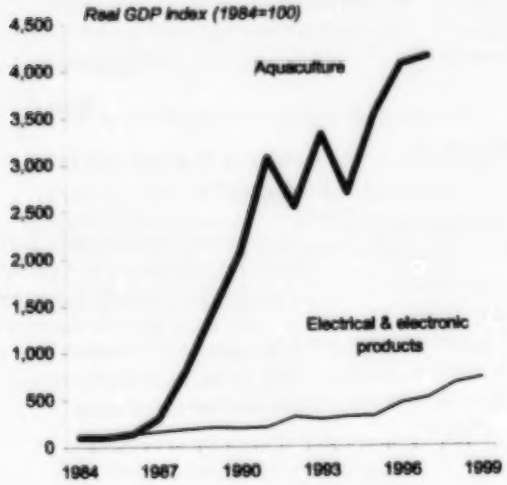
Emerging industries

In this section we'll take a brief look at what's been happening in some of the fastest-growing industries in the province. Both goods- and service-producing industries are included in this list. Most of these industries are still quite small, but they'll bear watching during the next few years.

Aquaculture is one of the fastest-growing industries in BC

One of the fastest-growing industries in the province is also one of the smallest ones. The aquaculture industry has grown to more than forty times the size it was in 1984. Of all the industries for which GDP estimates are produced, only three (miscellaneous petroleum & coal products, plastic film & sheeting, and electrical transformer manufacturing) have exhibited stronger growth than aquaculture during this period.

GDP in BC's aquaculture industry has grown from less than $2 million to $68 million since 1984
Figure 8



Source: BC STATS & Statistics Canada

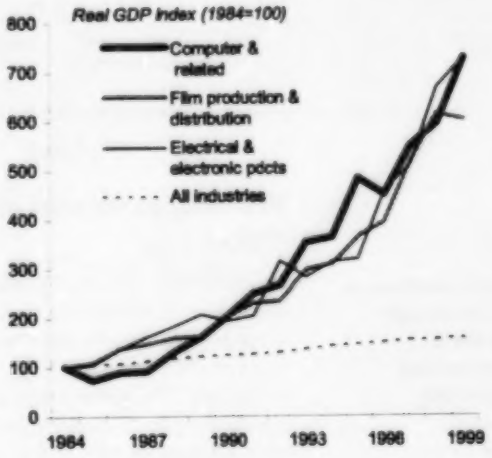
Figure 8

The aquaculture industry has increased ten times as much as the electrical and electronic products manufacturing industry, the fastest-growing component within the high-tech sector.

Although it's been around for decades, BC's aquaculture industry didn't really take off until the late 1980s, when a number of salmon farming operations started up in the province. The salmon farming component of the industry has continued to grow steadily since then. Shellfish, once the most important farmed product in this industry, now accounts for only a small share of its total output.

Aquaculture activities accounted for $2 million of BC's total GDP in 1984. By 1997 (the last year for which we have GDP estimates for this industry), it had expanded to $68 million. Of course, the very rapid rate of growth that we see in aquaculture is largely due to the fact that the industry was so small, but the increase is nonetheless quite remarkable.

Computer services, electronics, and film production lead the rest of the economy in terms of growth



Source: Statistics Canada

Figure 9

High tech and film industries have also been top performers
Figure 9

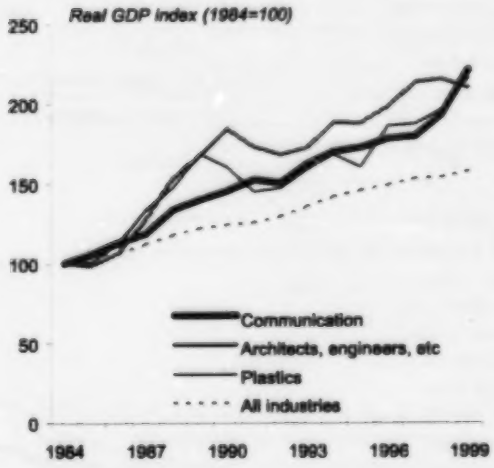
The high tech and film industries have seen very strong GDP growth since 1984. These industries have all grown by a factor of six or more during this period. The high tech industries (computer and related services and electrical and electronic products) grew at very similar rates. GDP in the film industry increased slightly less, rising from $32 million to $194 million during this period. Together, these industries now produce 2% of BC's

GDP. That compares to less than half a percent of the total in 1984.

Other fast-growing industries include communications, plastic manufacturing, and engineering and architectural services

Growth in some other industries hasn't been as phenomenal, but still indicates that substantial gains have been made since 1984. Telecommunications, plastics, and engineering services are also emerging as growth engines in the economy. All of these industries have more than doubled their contribution to BC's GDP during the last fifteen years. These industries now account for 5.2% of BC's total GDP, a bigger percentage than the tourism sector.

The plastics, engineering and communication industries have picked up speed since 1984
Figure 10



Source: Statistics Canada

Figure 10

Creating your own job: the self-employment phenomenon

There's been a lot of attention focused on people who work for themselves during the last few years. That's largely because a growing number of people are choosing this type of work arrangement.

One in every five workers in BC is self-employed
Figure 11

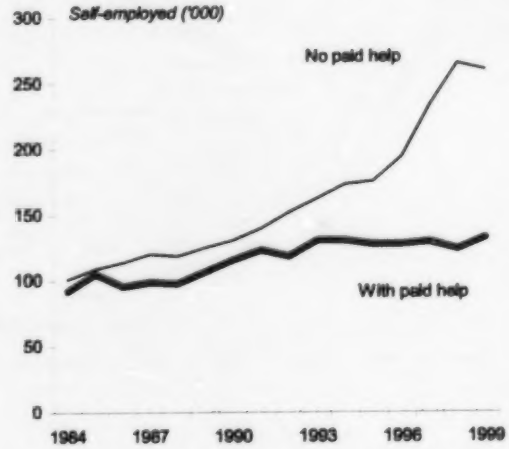
There are many reasons why someone might decide to work for his/her self, rather than as an employee. Some relate to lifestyle preferences (you have a lot more control over what you do, and when you do it, if you're your own boss), while others are a reflection of prevailing labour market conditions. Workers who've lost their jobs and can't find other employment that matches their skills may choose to start up their own business. So might someone who doesn't want or need to work full-time, but isn't ready to leave the labour market completely. A lot of retirees may choose this way of supplementing their pension income, as well as keeping their minds and bodies active, by pursuing interests that they haven't had time for in the past.

Source: Labour Force Survey

Figure 11

...and most work without any paid help
Figure 12

Someone with an entrepreneurial bent who wants to try out a new idea or sell a product that they've made might start their own business. So could someone who has specialized skills, or whose skills are in such high demand that they can earn more as contractors than they would if they were working as paid employees. Also, the nature of some types of occupations (for example, carpentry or dentistry) is such that self-employment is very typical.



Source: Labour Force Survey

Figure 12

Just how common is self-employment?

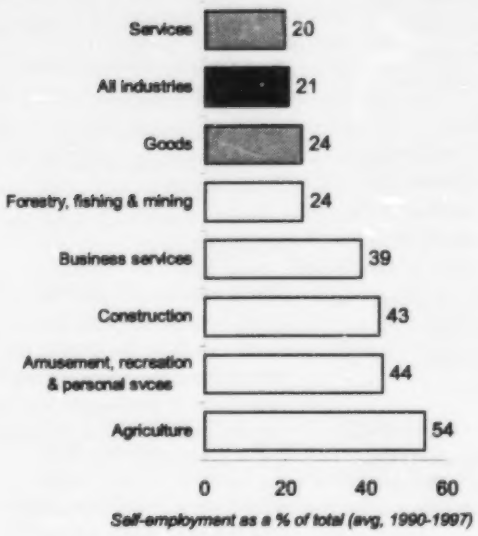
Self-employment is very common in BC, accounting for about a fifth of the work force in 1999. That's up from about 15% in 1984. As you can see in Figure 12, most of the people who are self-employed work without any paid help. Less than a third have paid employees; the vast majority are working on their own or with the help of unpaid family members. That represents a significant departure from the past. In 1984, the number of self-employed people with paid help was about the same as the number who were working on their own.

There's a lot of variation in the incidence of self-employment among different industries

Agriculture is the industry where self-employment is most prevalent, accounting for just over half of the work force. It's also very

common in amusement, recreation and personal services, and construction, where four out of every ten workers are their own bosses. Other industries where there's a higher-than-average incidence of self-employment include business services and forestry, fishing and mining although loggers and fishers are much more likely to be self-employed than are people who work in mining.

One out of every two people working in the agriculture industry is self-employed
Figure 13



Source: Labour Force Survey

Figure 13

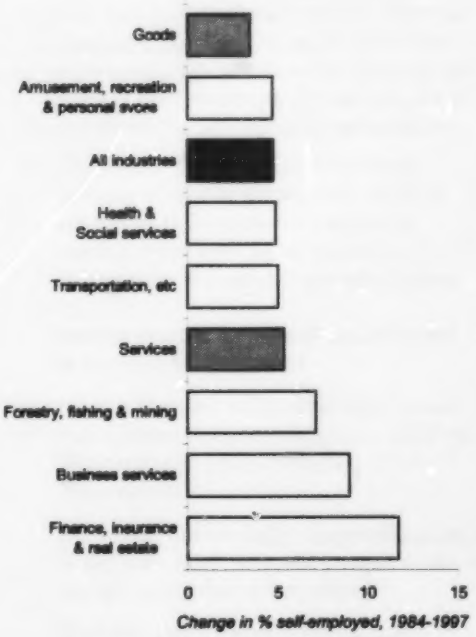
Self-employment accounts for a bigger share of the work force in the goods industry than it does in services, but that's changing. Figure 14 shows how the percentage of the work force that's self-employed in a number of industries has changed since 1984. The incidence of self-employment has risen in every industry where this type of work arrangement is an option. Agriculture, accommodation and food services, education and manufacturing have seen only small changes, but the shift has been quite significant in most industries. Note that we haven't shown all the industries on this graph. Only those where the percentage of self-employed workers grew at least as much as in the goods sector as a whole were included.

Service industries have seen the biggest increase in the incidence of self-employment since 1984
Figure 14

As you can see, the shift towards more self-employment has been greater in the service industries than in goods production. Between 1984 and 1997 (the last year for which we have this data), the percentage of the people working in finance, insurance and real estate who were self-employed increased from 12% to 23%. In the business services industry, the percentage rose from 30% to 39% during the same period. Forestry, fishing and mining is the only goods industry group where the incidence of self-employment has changed substantially since 1984, increasing its share of employment from 17% to 24%.

One reason why self-employment has increased more in the service sector than in goods industries could be the shift that is taking place in the industrial structure of the province. Service industries such as computer and engineering services are among the fastest-growing industries in the province. Home-based offices or partnership arrangements are quite common in these industries.

Being your own boss isn't risk free. It can be very satisfying, and in some cases, very lucrative, but there are a lot of self-employed people who don't succeed in their endeavours. Those who do, often spend long hours, and invest a lot of time and effort into building up their business. It might not be the right choice for you, but it's certainly an option you should consider when you're planning your career.



Source: Labour Force Survey

Figure 14

7. Where do you go from here?

So now you know some of the key facts about BC's economy and its major industries. What do you do with this information?

As we said in the first chapter of this book, if you understand how the economy works, and how the various industries are interrelated, you'll be better equipped to plan for your future. You can use this book to start your planning.

If you're interested in working in a particular industry, or even in a specific occupation, the information in this book will help answer some of the questions. You can use this guide in a number of ways:

- You can find out how an industry stacks up to the rest of the economy. Is it growing faster, or slower than other industries?
- You can check whether there's likely to be a demand for the type of occupation that you're interested in by looking at the sorts of jobs that are available in each industry.
- You can find out how the average earnings in a particular industry compare with those in the rest of the economy.
- You can find out whether jobs are more likely to be full-time or part-time
- You can find out what the industry's unemployment rate has been during the last few years, and how it compares to the average unemployment rate in BC.
- You can check whether self-employment is common or unusual in the industry.

If you spend some time researching these sorts of issues before you make decisions about your career, you'll be less likely to be surprised after you're in the labour force, or when you're looking for a job.

We've tried to fill you in on what's happening in BC's economy and labour market, and what's likely to happen in the future. But researching the economy and job market is just one piece of the puzzle you'll have to put together when you're considering the options for your future.

There are a lot of other resources available to you if you're really serious about researching career possibilities. We've included a brief description of some of these resources in the next chapter.

8. Where can you get more information about the BC economy and labour market?

If you're ever thinking about buying or renting a house, apartment or condo, one piece of advice that you're almost certain to hear is, "talk to someone who lives there." The same thing is true about planning your career. Whether it's a particular industry that you're interested in, or a specific occupation, one of the most important things you can do is to talk to somebody who's already working in that industry or occupation. They'll be able to tell you a lot more about the job situation and what it's like to work where they do than we could ever convey in this book. They'll also be able to fill you in about what kind of training is required, where you can get it, and they might even have some tips that will help you find a job.

But if you don't know, or can't get in touch with, someone who will fill you in on the details you need about a particular industry or occupation, there are other resources available to you.

- Check the print or on-line yellow pages of your telephone book. There are all sorts of professional, business and labour associations which you can contact to find out more about a specific industry or occupation. These organizations may also publish information about the types of skills required, as well as wages, guidelines and standards.
- Write or call to ask for copies of annual reports from various companies in an industry you're interested in. Or check them out at your local library, another resource center or on the Internet. Annual reports often have a lot of information about how a company's been doing, what's expected to happen, and the sort of jobs that are available.
- Visit a career, counseling or employment centre at your school, a college or university, or in your community. They will have information about training and job prospects in specific occupations. Or, you can check out resources and information about careers and industries at your local library or on-line. Try the business section of your local bookstore too.
- Attend an open house at a university, college or other institute in your area.
- Attend a Career Fair at your school or post-secondary institution.
- Visit the BC STATS website online at http://www.bcstats.gov.bc.ca/ or Statistics Canada at http://www.statcan.ca/ for two sources of data about wages, working conditions, employment, GDP and other information that will help you keep up-to-date about what's happening in BC's economy.
- Visit a Human Resources Development Canada office, or go on the Internet to http://www.bc.hrdc-drhc.gc.ca/ for more information on employment insurance and other programs and services designed to help you prepare for, find and keep work.
- Use the BC Government search engine at http://datafind.gov.bc.ca to access more information on BC education, training and employment programs. Or call Enquiry BC at 1 800 663-7867 for more information.
- The World Wide Web is a constantly growing source of information on most aspects of BC's economy and labour market. A selected list of on-line information resources is provided below.

Internet sources for general economic and labour market information

Human Resources Development Canada: http://www.bc.hrdc-drhc.gc.ca/ Click on "Research and Labour Market Information."

BC WorkInfoNet: http://workinfonet.bc.ca Your "one-start" shop for provincial career and labour market information.

Work*ink*: http://www.workink.com/ Work*ink* provides resources and information to enhance employment for persons with disabilities and employers.

BC STATS: http://www.bcstats.gov.bc.ca/ and Statistics Canada, the national statistics agency: http://www.statcan.ca/ These are two excellent sources of statistics and research, including labour market information.

Making Career Sense of Labour Market Information: http://www.makingcareersense.org/ Introduces labour market concepts, trends and issues. It also provides practical examples of researching labour market information and using it in the career development process.

Daily Prospects in Canada's Labour Market: http://prospects.skillnet.ca/ Daily information about occupations, industries and labour market trends across Canada.

Internet sources for industry/sector labour market information

Human Resource Sector Councils: http://www.councils.org/ Most of the sector councils have web sites providing information about the sector, including career awareness information.

Sector Studies: http://www.hrdc-drhc.gc.ca/hrdc/hrib/hrp-prh/ssd-des/sector_e.html Sector studies examine how changes in technology and the business environment affect the sectors' labour force.

Sector Information in BC: http://www.surfingforwork.com/topic.htm?chapterid=39&chapter=4 Offers an introduction to sectors in BC with links to specific sector resources related to career planning.

Industry Canada: http://strategis.ic.gc.ca/ A one-stop database for economic, trade, and government information.

Internet resources for occupational information

Work Futures: http://workfutures.bc.ca/ This edition of Work Futures can be found on the Internet in a user-friendly format which is easy to understand and navigate.

WorkScene: http://workinfonet.bc.ca/workscene Provides BC-based occupational profiles designed especially for youth and individuals with lower literacy skills.

Job Futures: http://www.hrdc-drhc.gc.ca/jobfutures Job Futures is similar to Work Futures, but offers occupational information for the Canadian labour market as a whole.

Industry Training and Apprenticeship Commission: http://www.itac.gov.bc.ca/ This site provides information about the apprenticeship and trade certification system in BC.

Daily Career News: http://workinfonet.bridges.com/ This site offers up-to-date occupational profiles that change each day. Note that the information isn't archived.

Work Destinations: A Guide to Relocation and Work in Canada: http://www.workdestinations.org/ Offers information about regulated occupations across the country for Canadians who want to practice their trade or profession in other provinces and territories

Essential Skills Profiles Database: http://www15.hrdc-drhc.gc.ca/ This site gives an overview of the HRDC Essential Skills Project and describes essential skills for 170 occupations.

9. A note on the North American Industrial Classification System (NAICS)

The classification system that's used to define industry groups is periodically reviewed to ensure that it's up-to-date, and adequately reflects the type of industries that are operating in the economy. We've been using the latest version of the Standard Industrial Classification System (SIC) since the early 1980s.

Until recently, the United States used a different classification system, which made it hard to compare industry statistics for the two countries. As our economic and trading ties with the US have strengthened, the need for consistency between Canada and the US has become more important.

Both countries have now adopted a revised system, called the **North American Industrial Classification System, or NAICS**. The guidelines for classifying industries under NAICS were finalized in 1997, and Statistics Canada is now in the process of converting to the new system. Some data is already being reported using NAICS industries. Other data sets are still being re-calibrated to conform to the new system. It's expected that that process will be completed within the next year or so.

The conversion to NAICS: adjusting Labour Force Survey data to conform to the SIC definitions used for other data sets

This conversion process presented some challenges as work on updating the Guide was begun. The last year for which a full set of SIC-based data is available from the Labour Force Survey (LFS) is 1997. Since then, industry details from the LFS have only been reported using the NAICS system. In the interim there have also been revisions to the basic LFS data, as information from the 1996 Census became available.

The LFS was the first major data set that was converted to NAICS. Most of the other industry information (including GDP and average weekly hours and earnings) that's available is still being published based on the SIC. The differences between the classification systems are too great to allow for any meaningful comparison of data that's based on SIC with NAICS information for industries with similar-sounding names.

Therefore, there is some variability in the years for which data in this report is presented. GDP, average weekly earnings and average weekly hours by industry, are all available based on the SIC for 1999. The LFS estimates for the economy as a whole, and in some cases for goods and services (where the definitional changes have had only a modest effect on the data) were based on the latest data released by Statistics Canada. In addition, industry employment estimates using the SIC system were generated for the period from 1984 to 1999 as described in the next section.

For most of the remaining LFS series, 1997 was the last year for which we could report the data by industry. For a limited number of series, the data was also available for the 1998 reference year.

In many cases where the data is being used to describe the structure of the industry, we've calculated averages for the period from 1990 on. These averages probably give a better picture of the structure of the industry than single-year data points would, as they smooth out year-to-year fluctuations which may simply be short-term deviations from an overall trend. However, the averages were compared to the annual data when the analysis was being done, and where there were differences between the average and latest available annual figure, this was noted and discussed in the text.

10. What's the source of the data in this book?

Data sources used in the analysis are described below.

GDP data for 1984 to 1999 (excluding estimates for tourism, high tech and aquaculture

Statistics Canada: Industry Measures and Analysis Division, Catalogue 15-203-XIB, plus unpublished estimates for selected industries

Employment and GDP estimates for tourism, high tech and aquaculture

BC STATS estimates published in the following reports:

- Business Indicators, November 2000: Tourism GDP and Employment
- Profile of the British Columbia High Technology Sector (high tech GDP), 2000 Edition
- British Columbia's Fisheries and Aquaculture Sector, 2000 Edition

GDP and Employment forecasts for 1999 to 2008

Human Resources Development Canada: Canadian Occupational Projection System (COPS) forecast (1999). This forecast is produced annually and indicates expected trends in occupations, employment, GDP and other labour force characteristics for the provinces and at the national level.

Employment data for 1984–1999

Statistics Canada: Labour Force Survey (LFS), catalogues 71-001 and 71-201. The Labour Force Survey is a monthly survey of individuals that asks them about their current work status, which industry they are working in (or worked in at their last job), and whether or not they are currently seeking employment.

The LFS no longer produces employment estimates that are based on the SIC. All industry data has been converted to NAICS. Because the other information has not yet been translated into the new classification system, estimates from the Canadian Occupational Projection System were combined with the latest LFS data to derive employment by SIC industry for 1998 and 1999.

The method used to produce the LFS data was revised after the changeover to NAICS occurred. In addition, 1996 census data became available and were used to adjust the figures. To ensure consistency with the revised LFS totals for the province, previously published LFS data for the years that were affected by this change were adjusted.

Unemployment rates, 1999 and averages for 1990 to 1997

Statistics Canada: Labour Force Survey (LFS), catalogues 71-001 and 71-201. The Labour Force Survey is a monthly survey of individuals that asks them about their current work status, which industry they are working in (or worked in at their last job), and whether or not they are currently seeking employment

The industry unemployment rates quoted in the text are averages for the period from 1990 to 1997 (the last year for which SIC-based data was available).

Average weekly earnings and average weekly hours for 1999

Statistics Canada: Survey of Employment, Payrolls and Hours (catalogues 72-002 and 72F0002XPB). This is a monthly survey of employers (as opposed to the LFS, which is an employee survey). It doesn't include people who are self-employed or working in agriculture and fishing. The average weekly earnings and average weekly hours data are for hourly-paid workers and include overtime pay. Estimates for some special industry aggregates were calculated by BC STATS.

Occupations by industry (1998)

Human Resources Development Canada: Canadian Occupational Projection System (COPS) forecast (1999). This forecast is produced annually and indicates expected trends in occupations, employment, GDP and other labour force characteristics for the provinces and at the national level.

Part-time and full-time employment, averages for 1990-97

Statistics Canada: Labour Force Survey (LFS), catalogues 71-001 and 71-201. The Labour Force Survey is a monthly survey of individuals which asks them about their current work status, which industry they are working in (or worked in at their last job), and whether or not they are currently seeking employment.

Self-employment, various years

Statistics Canada: Labour Force Survey (LFS), catalogues 71-001 and unpublished data for BC. The Labour Force Survey is a monthly survey of individuals which asks them about their current work status, which industry they are working in (or worked in at their last job), and whether or not they are currently seeking employment.

Employment by sex, average 1990-97

Statistics Canada: Labour Force Survey (LFS), catalogues 71-001 and 71-201. The Labour Force Survey is a monthly survey of individuals which asks them about their current work status, which industry they are working in (or worked in at their last job), and whether or not they are currently seeking employment.

Employment by establishment size (1997)

Statistics Canada: Labour Force Survey (LFS), catalogue 71-201. The Labour Force Survey is a monthly survey of individuals which asks them about their current work status, which industry they are working in (or worked in at their last job), and whether or not they are currently seeking employment.

Employment by region (1997)

Statistics Canada: Labour Force Survey (LFS), catalogue 71-201. The Labour Force Survey is a monthly survey of individuals which asks them about their current work status, which industry they are working in (or worked in at their last job), and whether or not they are currently seeking employment.

Appendix 1: How are industries defined?

The Standard Industrial Classification (SIC)

The SIC is the system used to allocate an establishment (the definition of establishments is given in the second chapter of this book) to a particular industry. All types of industries are included in the SIC, and the classification system is periodically revised and its definitions are updated to pick up changes in economic activity (for example, when new industries such as the computer services industry develop). The SIC was last revised in 1980.

Establishments are classified to industries based on what they produce and their major activity. The classification system puts all of the activities of an establishment into a single industry. For example, suppose that a construction company has an architect on staff who produces blueprints used by other construction companies. Even though architect's offices are normally classified to the business services industry, this architect's activities would show up as part of the output of the construction industry because the major activity of the establishment in question is construction, not business services.

The SIC is hierarchical, with industries grouped into Divisions, which are then broken down into Major Groups. There are also sub-categories (Industry Groups and Industry Classes), but the information we've used in this book is at the Division and Major Group level only. Most of the industry groupings we've used correspond to Divisions. However, we've classified some manufacturing activities together with the primary industries to which they're closely related. The definitions we've used are listed below, followed by a more detailed listing of the industries in each Division.

Goods sector	
Construction	Division F
Forestry	Division C
	Division E: major groups 25, 26 and 27
Agriculture, fishing, food and beverages	Division A and B
	Division E: major groups 10 and 11
Non-resource-based manufacturing	Division E: major groups 12, 15, 16, 17, 18, 19, 24, 28, 31, 32, 33, 37 and 38
Mining	Division D
	Division E: major groups 29, 30 and 36
Utilities	Division H: major group 49

Service sector	
Wholesale and retail trade	Divisions I and J
Health and social services	Division P
Amusement, recreation and personal services	Division R
Accommodation and food services	Division Q
Education	Division O
Transportation, storage and communication	Division G
	Division H: major group 48
Business services	Division M
Finance, insurance and real estate	Divisions K and L
Public administration	Division N

1980 Standard Industrial Classification Structure

Division A–Agricultural and Related Services Industries

Major Group 01–Agricultural Industries

Major Group 02–Service Industries Incidental to Agriculture

Division B–Fishing and Trapping Industries

Major Group 03–Fishing and Trapping Industries

Division C–Logging and Forestry Industries

Major Group 04–Logging Industry

Major Group 05–Forestry Services Industry

Division D–Mining (Including Milling), Quarrying and Oil Well Industries

Major Group 06–Mining Industries

Major Group 07–Crude Petroleum and Natural Gas Industries

Major Group 08–Quarry and Sand Pit Industries

Major Group 09–Service Industries Incidental to Mineral Extraction

Division E–Manufacturing Industries

Major Group 10–Food Industries

Major Group 11–Beverage Industries

Major Group 12–Tobacco Products Industries

Major Group 15–Rubber Products Industries

Major Group 16–Plastic Products Industries

Major Group 17–Leather and Allied Products Industries

Major Group 18–Primary Textile Industries

Major Group 19–Textile Products Industries

Major Group 24–Clothing Industries

Major Group 25–Wood Industries

Major Group 26–Furniture and Fixture Industries

Major Group 27–Paper and Allied Products Industries

Major Group 28–Printing, Publishing and Allied Industries

Major Group 29–Primary Metal Industries

Major Group 30–Fabricated Metal Products Industries (Except Machinery and Transportation Equipment Industries)

Major Group 31–Machinery Industries (Except Electrical Machinery)

Major Group 32–Transportation Equipment Industries

Major Group 33–Electrical and Electronic Products Industries

Major Group 35–Non-Metallic Mineral Products Industries

Major Group 36–Refined Petroleum and Coal Products Industries

Major Group 37–Chemical and Chemical Products Industries

Major Group 38–Other Manufacturing Industries

Division F–Construction Industries

Major Group 40–Building, Developing and General Contracting Industries

Major Group 41–Industrial and Heavy (Engineering) Construction Industries

Major Group 42–Trade Contracting Industries

Major Group 44–Service to Industries Incidental to Construction

Division G–Transportation and Storage Industries

Major Group 45–Transportation Industries

Major Group 46–Pipeline Transport Industries

Major Group 47–Storage and Warehousing Industries

Division H–Communications and Other Utility Industries

Major Group 48–Communication Industries

Major Group 49–Other Utility Industries

Division I–Wholesale Trade Industries

Major Group 50–Farm Products Industries, Wholesale

Major Group 51–Petroleum Products Industries, Wholesale

Major Group 52–Food, Beverage, Drug and Tobacco Industries, Wholesale

Major Group 53–Apparel and Dry Goods Industries, Wholesale

Major Group 54–Household Goods Industries, Wholesale

Major Group 55–Motor Vehicle, Parts and Accessories Industries, Wholesale

Major Group 56–Metals, Hardware, Plumbing, Heating and Building Materials Industries, Wholesale

Major Group 57–Machinery, Equipment and Supplies Industries, Wholesale

Major Group 59–Other Products Industries, Wholesale

Division J–Retail Trade Industries

Major Group 60–Food, Beverage and Drug Industries, Retail

Major Group 61–Shoe, Apparel, Fabric and Yarn Industries, Retail

Major Group 62–Household Furniture, Appliances and Furnishings Industries, Retail

Major Group 63–Automotive, Vehicles, Parts and Accessories Industries, Sales and Service

Major Group 64–General Retail Merchandising Industries

Major Group 65–Other Retail Store Industries

Major Group 69–Non-Store Retail Industries

Division K–Finance and Insurance Industries

Major Group 70–Deposit Accepting Intermediary Industries

Major Group 71–Consumer and Business Financing Intermediary Industries

Major Group 72–Investment Intermediary Industries

Major Group 73–Insurance Industries

Major Group 74–Other Financial Intermediary Industries

Division L–Real Estate Operator and Insurance Agent Industries

Major Group 75–Real Estate Operator Industries (Except Developers)

Major Group 76–Insurance and Real Estate Agent Industries

Division M–Business Service Industries

Major Group 77–Business Service Industries

Division N–Government Service Industries

Major Group 81–Federal Government Service Industries

Major Group 82–Provincial and Territorial Government Service Industries

Major Group 83–Local Government Service Industries

Major Group 84–International and Other Extra-Territorial Government Service Industries

Division O–Educational Service Industries

Major Group 85–Educational Service Industries

Division P–Health and Social Service Industries

Major Group 86–Health and Social Service Industries

Division Q–Accommodation, Food and Beverage Service Industries

Major Group 91–Accommodation Service Industries

Major Group 92–Food and Beverage Service Industries

Division R–Other Service Industries

Major Group 96–Amusement and Recreational Service Industries

Major Group 97–Personal and Household Service Industries

Major Group 98–Membership Organization Industries

Major Group 99–Other Service Industries

Appendix 2: How are occupations defined?

The National Occupational Classification (NOC) is the system that's used to classify jobs into occupations. Jobs are classified based on skill level and skill type.

Skill types

Skill types are defined in terms of the type of work performed (we've used skill types in our description of various occupations in each industry). There are ten occupational groups that are defined in the NOC based on skill type:

0. **Management occupations**—legislators, senior management occupations and middle and other management occupations.
1. **Business, finance and administration**—occupations that involve supervising and providing financial and business services, administrative and regulatory services, and clerical support services.
2. **Natural and applied sciences and related occupations**—professional and technical occupations in the sciences, including physical and life science, engineering and architecture.
3. **Health occupations**—occupations involving providing health care services directly to patients and occupations that provide support to professional and technical staff.
4. **Occupations in social science, education, government service and religion**—a range of occupations concerned with law, teaching, counseling, conducting social science research, developing government policy and administering government and other programs.
5. **Occupations in art, culture, recreation and sport**—professional and technical occupations related to art and culture, including the performing arts, film and video, broadcasting, journalism, writing, creative design, libraries and museums. It also includes occupations in recreation and sport.
6. **Sales and service**—sales occupations, personal and protective service occupations, and occupations related to the hospitality and tourism industries.
7. **Trades, transport and equipment operators and related occupations**—construction and mechanical trades, trades supervisors and contractors and operators of transportation and heavy equipment.
8. **Occupations unique to primary industry**—non-technical occupations in mining, oil and gas production, forestry and logging, agriculture, horticulture and fishing.
9. **Occupations unique to processing, manufacturing and utilities**—supervisory and production occupations in manufacturing, processing and utilities.

Skill levels

Skill levels are defined in terms of the amount and type of education and training that are required to enter and work in an occupation. Four skill levels are identified in the NOC:

Skill Level A

- University degree (bachelor, master, or post-graduate)

Skill Level B

- Two to three years of post-secondary education at a community college or institute of technology, or
- Two or four years of apprenticeship training, or
- Three to four years of secondary school and more than two years of on-the-job training, training courses or specific work experience
- Also supervisory occupations and those with significant health or safety responsibilities

Skill Level C

- Usually high school completion
- Up to two years of on-the-job training, training courses or specific work experience

Skill Level D

- Up to two years of secondary school, and
- Short demonstration or on-the-job-training

This table shows the relationship between skill levels and skill types. A brief description of the major occupational groups can be found in the following table.

National Occupational Classification Matrix

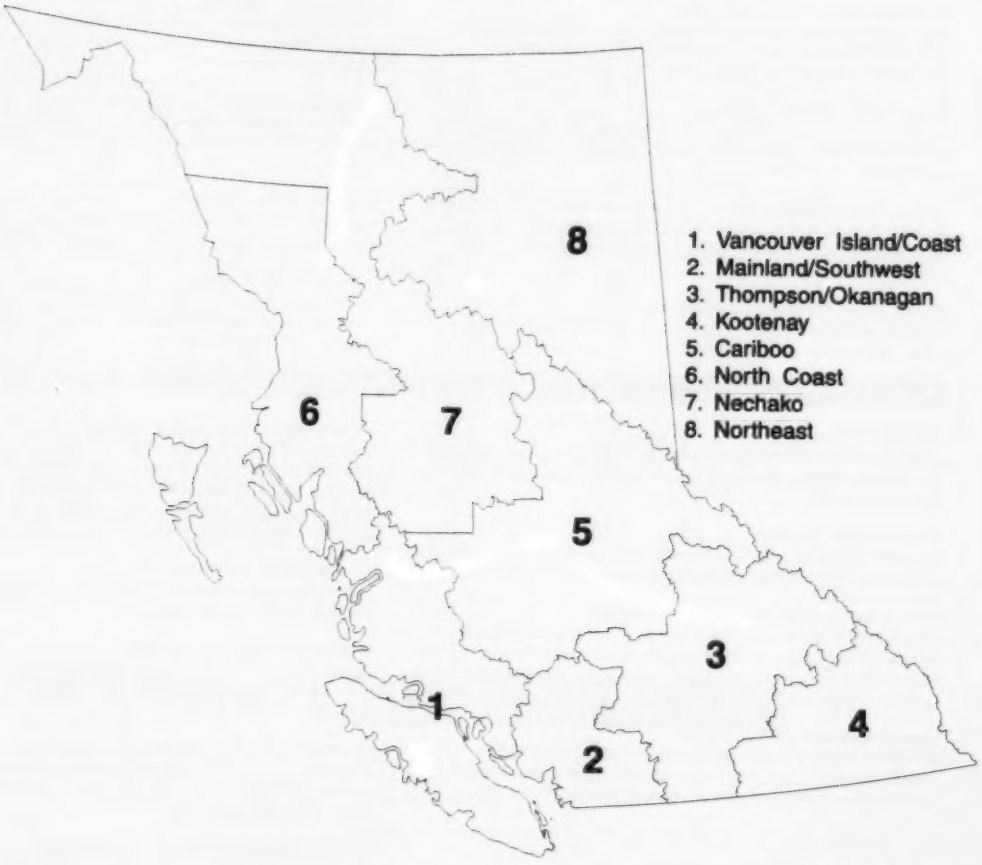
	Skill level				
	Management Occupations	Major Groups			
Skill Type:	0	A	B	C	D
Senior management occupations	00, 001				
Business, finance and administration	011, 012, 013	11	12	14	
Natural and applied science & related	021	21	22		
Health occupations	031, 041	31	32	34	
Social science, education, government service & religion	031, 041	41	42		
Art, culture, recreation & sport	051	51	52		
Sales & service	061, 062, 063, 064, 065		62	64	66
Trade, transport & equipment operators & related	071, 072		72/73	74	76
Unique to primary industry	081		82	84	86
Unique to processing, manufacturing & utilities	091		92	94/95	96

The 26 Major Groups of the National Occupational Classification (NOC)

Major Group	Occupation
0	Senior Management Occupations
01/09	Middle Management & Other Management Occupations
11	Professional Occupations in Business & Finance
12	Skilled Administrative & Business Occupations
14	Clerical Occupations, General Office Skills
21	Professional Occupations in Natural & Applied Sciences
22	Technical Occupations Related to Natural & Applied Sciences
31	Professional Occupations in Health
32	Technical Skilled Occupations in Health
34	Assisting Occupations in Support of Health Services
41	Professional Occupations in Social Science, Education, Government Services & Religion
42	Paraprofessional Occupations in Law, Social Services, Education & Religion
51	Professional Occupations in Art & Culture
52	Technical & Skilled Occupations in Art, Culture, Recreation & Sport
62	Skilled Sales & Service Occupations
64	Intermediate Sales & Service Occupations
66	Elemental Sales & Service Occupations
72/73	Trades & Skilled Transport & Equipment Operators
74	Intermediate Occupations in Transport, Equipment Operation, Installation & Maintenance
76	Trade Helpers, Construction Labourers & Related Occupations
82	Skilled Occupations in Primary Industry
84	Intermediate Occupations in Primary Industry
86	Labourers in Primary Industry
92	Processing, Manufacturing & Utilities Supervisors & Skilled Operators
94/95	Processing & Manufacturing Machine Operators & Assemblers
96	Labourers in Processing, Manufacturing & Utilities

Appendix 3:

British Columbia Development Regions



BC STATS Product Descriptions

RELEASES:

Current Statistics — Monthly
This release lists the latest monthly and annual data on the labour force, consumer price index, production, and other important economic indicators.

Business Indicators — Monthly
Provides a range of up-to-date economic and financial data, including production and shipments for British Columbia's major industries.

Consumer Price Index — Monthly
Price trends in British Columbia, Vancouver and Victoria for various categories of consumer spending. Includes historical summaries and comparisons with major Canadian cities.

Exports (B.C. Origin) — Monthly
British Columbia exports to major trading partners and blocs. Exports of more than 50 selected items to the U.S.A., Japan and the European Union are included.

Tourism Sector Monitor (formerly Tourism Room Revenue) — Monthly
Revenues received from room rentals by type of accommodation, with a geographic breakdown by development region, regional district, and selected urban areas.

Small Business Quarterly — Quarterly
A variety of data series on, or of interest to, small business in British Columbia. Replaces the monthly *Business Formations and Failures*.

Earnings and Employment Trends — Monthly
A comprehensive look at the labour market in B.C., providing sectoral analysis of the B.C. labour force and its wage structure.

Labour Force Statistics — Monthly
A monthly summary of labour force conditions, showing employment and unemployment by age, sex, occupation and industry, with regional breakdowns.

Immigration Highlights — Quarterly
Features immigrant landings to British Columbia and Canada by place of origin, destination and immigration status: independent or dependent, entrepreneur, and investor.

Migration Highlights — Quarterly
Detailed current information on the flow of people between British Columbia and other provinces and territories. Also contains components of population change.

Quarterly Regional Statistics — Quarterly
Organized by region, and features current monthly and quarterly economic data. Includes charts and tables. Approximately 240 pages.

Major Projects Inventory
Information on major capital projects, listed by development region and status (proposed, under construction, on hold, or completed.) Also includes regional profiles and maps.

PUBLICATIONS:

Financial and Economic Review — Annual
A valuable source of information on the province—its regions, provincial government programs and finances, economic growth and development, and demographic trends.

Manufacturers' Directory — Annual
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